PRINTING EQUIPMENT ENGINEER

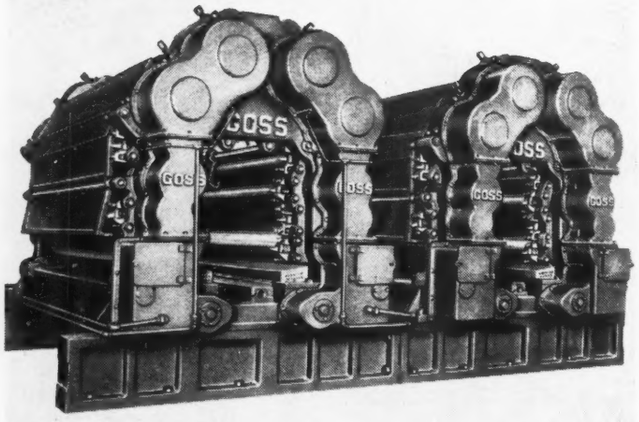
OCTOBER • 1933

A Technical Publication for Mechanical Executives Responsible for Printing Production, Equipment and Supplies

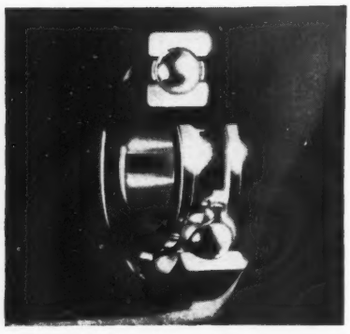
THE SKF GALLERY OF DISTINGUISHED PERFORMANCE USERS:

THE GOSS PRINTING PRESS CO.

HIGH SPEED GOSS UNITS DEMAND SKF RELIABILITY



"UP TO THE MINUTE", says Goss of their High Speed Anti-Friction Press... and that of course includes SKF Ball Bearings. In the press room, speed and reliability are demanded continuously. There can be no delay in getting out the news of fast moving world events. And to meet the requirements of this swift tempo... SKF Performance Takes Preference Over Price.



Seventy-eight SKF Ball Bearings are used in each unit of the Goss High Speed Press to insure the highest precision and accuracy of results. SKF's show no wear and need no adjustments throughout a long life. For these reasons better printing at greater speed is assured with extreme smoothness in operation and substantial economy in power requirements and upkeep.

SKF INDUSTRIES, Inc.
40 East 34th Street, New York, N. Y.

3096

WHERE PERFORMANCE TAKES PREFERENCE OVER PRICE

●*You may buy a bearing as a bargain but try and get a bargain out of using it, for nothing is apt to cost so much as a bearing that cost so little*

SKF
BALL AND ROLLER BEARINGS

THE EVENING STAR—WASHINGTON, D. C.

Many notable newspapers belong to Stahi's wide circle of owners. The WASHINGTON, D. C., EVENING STAR, recently purchased a Stahi AUTOFORMER, which sold itself to this splendid newspaper—because of its marvelous performance; in producing Uniform Casting and Uniform Printing Levels, and its many other advantages in routine work of preparing dry mats—ready for casting units.

STAHI NEWSPAPER SUPPLY COMPANY, Inc.

Los Angeles, Calif. **Seattle, Washington** **Portland, Oregon**

AGENCIES

GOSS PRINTING PRESS COMPANY
Chicago, New York, San Francisco

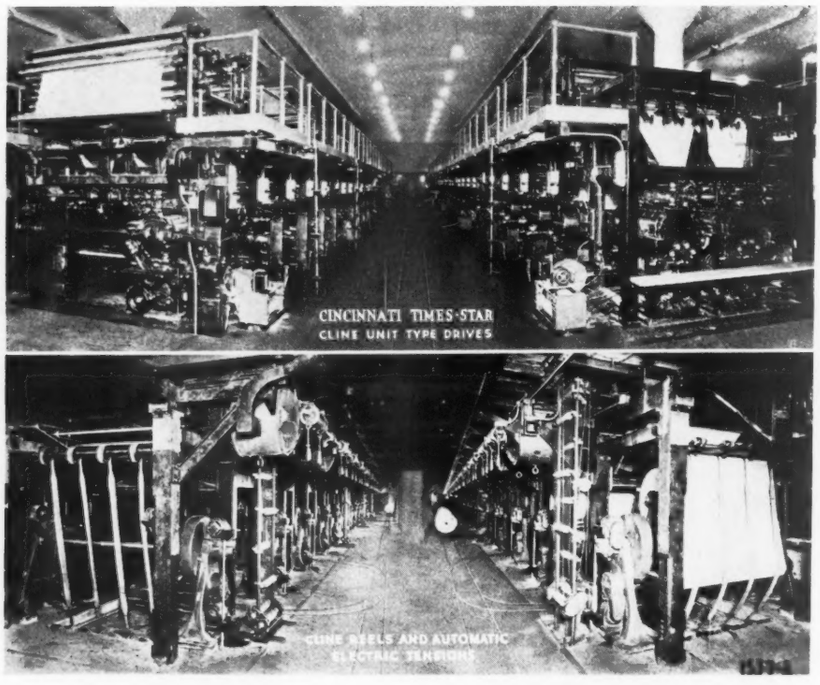
GOSS PRINTING PRESS COMPANY, LTD.
London, England

TORONTO TYPE FOUNDRY COMPANY
Toronto, Montreal, Winnipeg

WOOD FLONG CORPORATION
Hoosick Falls, N. Y.

for October, 1933

Operation Proves the Success Of



CLINE CORRELATED EQUIPMENT

IN THE CINCINNATI TIMES-STAR PLANT

The photograph above, from the pressroom of the new Cincinnati Times-Star plant, illustrates the installation of the Cline Unit Type Press Drives and Control, Cline Reels with Flying Pasters and Automatic Electric Tensions in connection with the 28 press units and 9 folders installed.

The Cline Electric Mfg. Co. engineered and correlated the apparatus in this entire plant, relieving the publisher of details and providing a plant for efficient and rapid production of the newspaper.

In addition, the Cline Electric Mfg. Co. furnished for this plant:

Flush type Plate Conveyor System.

Tracks, Dollies and switching equipment for handling the rolls of paper in the reel-room.

Automatic Paper Elevators for delivering the rolls to the required floors.

Automatic One-Man Electric Elevators and Slide Poles for operators between pressroom and reelroom.

Complete paper handling equipment with Automatic Tiering Machines for the paper storage.

Combined Bundling Tables and Conveyors in the mailing room.

All motors and control equipment for stereotype and composing department.

CLINE ELECTRIC MFG. CO.

MAIN OFFICE: Conway Building, 111 W. Washington St., CHICAGO, ILL.

EASTERN OFFICE
The News Building
220 East 42nd Street, New York City

CLINE ELECTRIC MFG. CO. CHICAGO — CLINE SYSTEM

WESTERN OFFICE
First National Bank Building
San Francisco, California

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A TECHNICAL MAGAZINE FOR PRINTING'S MECHANICAL EXECUTIVES

ASSOCIATE MEMBER NATIONAL PRINTING EQUIPMENT ASSOCIATION, INC.

This Issue Contains:

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L. W. Claybourn

Determining the Value of Used Machinery - - 9
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Let others also read The Engineer

After you have read this magazine pass it along to the other men in your organization. They will undoubtedly get helpful ideas from its pages.

Check in left column after reading. Note articles of interest.

☐ *Production Manager*

☐ *Mechanical Superintendent*

☐ *Composing Room Superintendent*

☐ *Chief Composing Room Machinist*

☐ *Monotype Department*

☐ *Photo Engraving Department*

☐ *Foreman Lithographing Department*

☐ *Superintendent Stereotype Foundry*

☐ *Superintendent Electrotype Department*

☐ *Superintendent Press Room*

☐ *Bindery Foreman*

☐ *Manager*

☐ *Purchasing Agent*

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He Still Can Handle The Wheel

RIDICULOUS, no doubt, but it's possible for a blindfolded man to drive an automobile. But what of the four-year-olds dashing heedlessly across the streets? . . . Red and green traffic lights? . . . Trucks pulling out from driveways? . . . Sudden stops by cars ahead?

Even though a companion did the seeing for him, orders probably could not be transmitted in time to avoid some smash-ups. Still, after an extended period of intensive practice a blindfolded person might drive from the Waldorf-Astoria to Coney Island without accident. Sane humans, however, wouldn't think of making the attempt.

Neither would they long ignore the opportunity to remove such a handicap.

Yet, a broadly comparable disadvantage exists in composing rooms not equipped with Black and White matrices. Linecasting machine operators are not actually blindfolded, of course.

But when it comes to seeing what they are producing they might as well be—because reference characters on ordinary brass matrices are quite difficult to read.

Since the invention of the Linotype machine, operators have been working under this handicap. By backing up and sputtering around they eventually make the corners O. K. But it no longer is necessary to keep this blindfold on an operator—*furthermore, it's cheaper to let him see.*

A national survey shows that in every 100 lines of original machine composition six **(6%)** are reset because of errors—every seventeenth line is rebuilt. Assuming that only double time is necessary to correct, **12%** (2×6%) of an operator's time is devoted to nonproductive effort. Hence, in the average composing room, **18%** (6%+12%) of all operator-hours are spent in producing and correcting the lines which contain errors.

To this waste is added the time of proofreaders and floor men in detecting errors and placing corrections.

But the blindfold can be removed. It isn't necessary to rebuild every seventeenth line. By having your present matrices treated with the Black and White process—*making reference characters plainly visible in the assembler*—a significant proportion of error waste can be prevented.

This isn't just guess work. We *guarantee* a 25% reduction in all errors in original machine composition and *prove this saving* before you pay us a penny.

Matrix Contrast Corporation

Empire State Building New York City

Sole licensees of the Percy L. Hill Black and White Patent No. 1466437, held valid by U. S. District Court, Eastern District of New York. Infringers will be vigorously prosecuted.

PRINTING EQUIPMENT ENGINEER

OCTOBER, 1933

Standards in Letterpress Printing

By L. W. CLAYBOURN*

Mr. Claybourn spoke before the Craftsmen's Convention in Chicago during the latter part of August.

THERE can be only one way to attain precision and accurate standards in the production of letterpress printing, and that is by using equipment primarily designed to meet these standards.

Only by the use of precision equipment, built to precise and accurate standards, in the manufacture of original engravings, electrotypes and stereotypes and in the printing press itself, can we make accuracy a fundamental part of printing.

In this article I wish to discuss only those standards which apply to the mechanical side of printing, and in which I have been deeply interested for a great many years. I will start with the original engraving and proofing, and then take up the matter of the locked-up form, electrotypes and stereotypes, mechanical line-up and registering of plates and the precision printing press itself.

THE ORIGINAL ENGRAVING AND PROOFING

The very foundation of a good printing job is a good engraving, proofed as etched without assistance of overlaying or underlaying, using the same ink and paper with which the finished job will be produced.

We need not go into detail regarding the requirements necessary for a precise, accurate, mathematically and mechanically correct original engraving, as we do not wish to take exception to the methods now employed in the making of original engravings, but we do very strongly believe that engravings, assuming they are the product of the skilled crafsman, must be proofed on an accurate proofing press, *under conditions closely approximating actual press conditions.* We are then in a position to know without question that we have engravings with a correct printing surface, or we are in a position to know what corrections must be made before original plates are duplicated for production on printing presses.

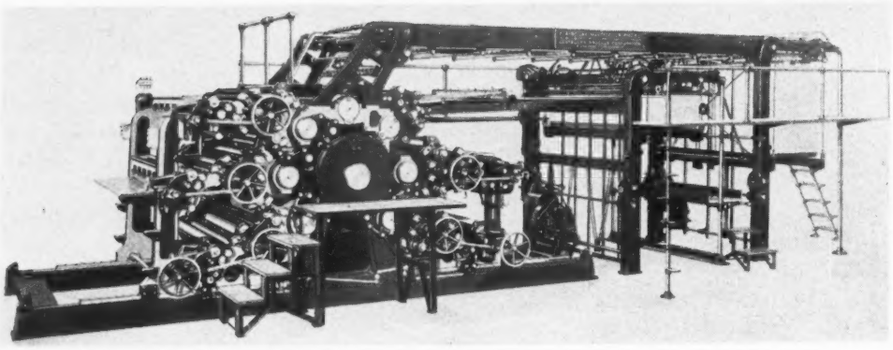
With a faithful proof of the plate the photo-engraver shows the printer the quality of the engraving. The printer in turn in locking the engraving with the form alters the condition. He should have as part of his plant equipment a precision proof press. It is not merely a proofreader's proof which is needed, but one which proves the entire form and all materials entering into that form from a precision quality printing standpoint. The inks and the paper which are to be used should also be tested and all corrections should be made before sending the plates or forms to the productive center—the pressroom.

THE STORY OF PRE-MAKEREADY

While many Craftsmen have listened to Mr. Claybourn's arguments for the adoption of mechanical precision methods in the production of printing, there are many more who have not had the opportunity. It is for them especially that this article is printed.

Mr. Claybourn's contention is that all forms (whether plates, type matter or cuts) should be pre-tested for height-to-paper, as well as accuracy of lock-up before sending them to the pressroom so as to eliminate makeready on the press. Obtaining precision plates through machinery designed for the purpose enters into the Claybourn Process. Inks and paper to be used should be pre-tested also, according to the writer.

*President, Claybourn Corporation, Milwaukee, Wis.



Claybourn Multi-color Precision Printing Press, Prints One to Five Colors in One Operation at a Speed Better Than 3000 Per Hour.

The printer should equip himself to fully determine the fitness of materials before trying to print them, and in this way his pressroom will no longer be a laboratory with many hours dissipated in eliminating unnecessary inaccuracies.

THE LOCKED-UP FORM

After considerable investigation, we were astonished to find a very inefficient practice still existing among many of the largest publishers and printers in the preparation of forms for reproduction. They thought that limited time did not permit of precision methods. We found, however, on close analysis that hours of time are wasted due to the use of improper materials with forms locked up in springy chases, cuts not uniformly mounted to precision and many pieces of inadequate material used, such as wood furniture, etc. As against this cumbersome inaccuracy, we have developed adequate equipment and have little difficulty in educating the printer to the precision lock-up, well justified, cuts mounted correctly, locked up with expansion quoins that will not spring or distort the locked-up form. When the five mechanically correct parts of our precision lock-up are compared with the thirty or more miscellaneous pieces of some of the chases found in many publishing houses, the economy and time-saving element immediately sells the idea of a precision lock-up. Precision locked forms permit of making precision plates and eliminate hand work and make mechanical operation possible.

In this connection I wish to say that printing plates are only duplicates of the original form. There is only one definite way to determine the condition of the form which is to be moulded, and that is by proofing it and making the necessary corrections before moulding. Where inaccuracies exist they can then be easily corrected and the form, therefore, goes to the electrotyper or stereotyper as mechanically correct as human ingenuity can make it. With all basic errors eliminated, it is a precision lock-up.

THE ELECTROTYPE OR STEREOTYPE

The electrotyper, in order to maintain the standards of accuracy which we have set up, in order to give accurate duplicate plates, must also have standards of precision and accuracy and the necessary equipment that will produce his part of the procedure satisfactorily.

The platemaker must have a precision moulding press that will produce a perfect mould, plate shaving machines, gauging machines, bending machines, etc., which will permit him to produce electrotypes or stereotypes to meet the precision standards so vitally necessary.

When Claybourn precision plate manufacturing machinery was first offered to the electrotyping industry, we naturally faced the obstacles which usually confront pioneers in any field. Custom and tradition had to be overcome. The standards of precision and accuracy were looked upon as ideals, not as practical ideas which could be adopted immediately. Yet, wasteful, slipshod methods have given way to machine shop standards of accuracy.

It is conservative to say that fifty per cent of press worry could be overcome by a fuller comprehension and use of electrotypes accurately made, properly inspected, tested and ready as far as skill of men, coupled with precision machinery, can make them, going into service in a minimum of time and remaining accurate under continuous service.

Correcting printing plates on the press is a costly, laborious, time-consuming operation—an antiquated custom that eats into profits.

With modern precision machinery, printing plates can and should be made and tested for their printing quality and fitness before they are put on the press. Especially short runs can be made profitable by the use of perfected and pretested plates as often it is noted that makeready, lineup and registering time exceed the actual running time.

Accurate precision-made plates when used on precision printing presses require little or no makeready. The plates themselves last longer, yield many additional thousands of perfect impressions, and the presses need never be stopped for costly adjustments in makeready.

While I cannot go into detail in this article, I feel something must be said about curved electrotypes. Perhaps no single factor has so greatly retarded rotary printing, and particularly multicolor printing, as the poorly curved plate produced by inaccurate methods. Flat plates curved cold or on the so-called hot drum bender are not curved to a true arc, nor is it possible to produce a curved plate without stretch by this method. Our process of making non-stretch curved plates makes possible the production of curved plates that are uniform in thickness to within limits of plus or minus one-half of one-thousandth of an inch, and they fit the plate cylinder so accurately that they become an integral part of the same. Because of modern developments we are now able to produce non-stretch perfected curved plates as speedily as flat plates, and with the use of cast curved plates the expense will be minimized.

Our precision curved plates are produced by first curving

Claybourn Multi-color Precision Proof Press Which, It Is Claimed, Takes Proofs Approximately Representative of Actual Press Conditions.

the flat plate on a specially designed hot curving machine employing heat. The curving is performed while the backing metal is reduced to a plastic state by electrically controlled heat. The plate is then solidified in a curved plate finishing machine, which rolls the plate by special process, solidifying the backing metal, which in turn eliminates hand finishing. The plate is then precision shaved in a curved plate shaver under mechanical pressure, and finally proofed on a precision proof press, without makeready of any kind, under actual printing conditions. If the impression from the plate on the rotary press does not equal the quality of the proof of the plate taken on the precision proof press, it is evidence that either the plate or impression cylinder, or both, require mechanical attention and must be brought up to precision standards. After the printing plate meets our standards of accuracy, we must next give thought to mechanical line-up and registering plates on the press.

MECHANICAL LINE-UP AND REGISTERING PRINTING PLATES ON THE PRESS

First, we have spent many years and large sums of money in developing proper machinery to eliminate makeready. Secondly, we developed a precision-built printing press. Then after exhausting time studies of the preliminary work and the entire mechanical procedure required in starting a job, facts revealed that the time element of lining up and registering the plates was about equal to the time we had eliminated in makeready. The two dovetailed, because the old procedure of underlaying and overlaying plates disturbed register. The elimination of makeready helped registering time, but did not eliminate the time dissipated in registering plates, which may now be accomplished by mechanical procedure.

Continued on page 24

Determining the Value of Used Machinery

[AN EDITORIAL]

SINCE publishing the National Printing Equipment Association's proposed plan for dealing with the used printing machinery problem in the September ENGINEER, further revisions and refinements in the plan have been made by the Committee on Used Machinery.

In response to suggestions of manufacturer-members, the progressively rated formula for depreciation of used machinery has been deleted for the reason that the plan was found impracticable for application to the products of all the members. Various kinds of machinery and equipment depreciate at vastly different rates. This is particularly true of some of the lighter forms of equipment which would be subject to the Code and yet would not be classified as machinery.

To comprehend the plan in making allowances for used machinery taken in trade for new equipment, perhaps it would be well to state, first of all, that manufacturers' prices for new machinery and equipment must be predicated upon "every ascertainable cost in the operation of the business."

On account of the varying kinds of businesses represented in the membership of the National Printing Equipment Association, Inc., a uniform cost-accounting system could not be stipulated.

President Arthur Bentley of the Miehle Printing Press and Manufacturing Co., however, did write a general cost formula (Exhibit B) which is embodied in the Code and to which every manufacturer member subscribes when he signs the Code.

The cost formula has been incorporated in Article VII, Sec. 2, sub-sections (a), (b) and (c), which read as follows:

ARTICLE VII—*Unfair Competitive Practices.*—Unfair competition under this Code shall be deemed to comprise any of the following acts or practices:

1. Any and all noncompliance with this Code.

2. Willfully selling for use in the domestic market or offering to sell for domestic use any machinery and/or equipment and/or supplies at a price or upon terms or conditions that will result in the customer paying to the seller for the goods received, less than their share of every ascertainable cost in the complete operation of the business, costs to be determined according to the formula set forth in Exhibit "B" attached hereto and made a part hereof. This clause shall not apply to bona fide discontinued lines.

(a) Every Manufacturer, Dealer, and Importer shall establish his own list prices for his machinery and equipment and the list prices for regularly listed machinery and equipment shall be filed with the National Printing Equipment Association, Inc., as the agency for the Code Authority. The list prices so filed shall remain in effect and no deviation may be made from them, until changes are made as provided in section (c) following. It shall be considered an unfair trade practice to sell any such machinery and equipment at prices below those filed with the National Printing Equipment Association, Inc.

(b) Upon the written application of any Manufacturer, Dealer, or Importer within the Industry, the National Printing Equipment Association, Inc., may furnish to such concerns manufacturing or dealing in similar equipment a copy of any price lists so filed with it.

(c) In order to effect changes in the prices filed as provided in (a) above, the Manufacturer, Dealer, and Importer shall file notice of change, including a schedule of new prices, with the National Printing Equipment Association, Inc., at its head office, and the new prices shall become effective upon filing.

Since the manufacturer has established the selling price of new equipment through the medium of the cost formula, he may also determine and establish his own maximum allowances for machinery or equipment of his own manufacture accepted in trade as part of the purchase price of new machines or equipment. In case he accepts the equipment of another manufacturer, he will be guided by the schedule of allowances which has been filed by that manufacturer with the National Printing Equipment Association. This is set forth in Article VII, Sec. 3, sub-sections (a), (b) and (c) of the proposed Code, as follows:

3. Making trading allowances for products in excess of allowances as defined in (a), (b), (c) of this section, for the purpose of securing competitive advantage:

(a) Every Manufacturer shall establish his own maximum allowances for machines and/or equipment of his own manufacture accepted in trade as part of the purchase price of new machines and/or equipment only; provided, however, that dealers acting in a sales capacity for Manufacturers shall establish with Manufacturers, whom they represent, maximum allowances for used machinery and/or equipment accepted in trade, but only as to the sale of new machinery and/or equipment in the sale of which they represent Manufacturers on either discount or commission basis. He and/or they shall file with the National Printing Equipment Association, Inc., as the agency for the Code Authority, a schedule of such allowances and shall not allow in excess thereof until changes are made therein as provided in section (c) following. In the event that the Manufacturer of any machinery or equipment in question is no longer in business, then the Board of Directors of the Association shall establish the maximum allowances thereon, which shall be filed as above specified.

(b) The National Printing Equipment Association, Inc., shall, on request, furnish to every Manufacturer, Dealer and Importer within the industry, a copy of the schedules of allowances filed in accordance with (a) above and no Manufacturer, Dealer or Importer shall accept in trade any used machines and/or equipment at an allowance greater than the maximum so filed by the respective Manufacturers, Dealers, and Importers.

(c) In order to effect changes in his allowance schedule as provided in (a) above the Manufacturer, Dealer, and Importer shall file notice of such revision of maximum allowances including a schedule thereof with the National Printing Equipment Association, Inc., at its head office, and the new allowances shall become effective upon filing.

PRINTING EQUIPMENT ENGINEER subscribes heartily to the contention that the Code will lend itself as a powerful influence in helping to rid the industry of the used machinery octopus which has been spreading its tentacles to strangle progress.

PRINTING EQUIPMENT ASSOCIATION, INC., MEMBERSHIP LIST

Following is a list of members of the Printing Equipment Association, Inc., arranged alphabetically. The list is revised to September 30.

A
Acme Multi-Color Company
American Type Founders Co.

B
Babcock Printing Press & Mfg. Company
Berry Machine Company
Boston Wire Stitcher Company
Brackett Stripping Machine Co.
Brandtjen & Kluge, Inc.

C
California Printers Supply Co.
Challenge Machinery Company
Chambers Brothers Company
Chambon Corporation
Chandler & Price Company
Claybourn Corporation
Cline Electric & Manufacturing Company
Cochrane-Bly Company
C. B. Cottrell & Sons Company
Cross Paper Feeder Company

D
Davidson Perforator Corporation
Dexter Folder Company
J. E. Doyle Company

G
Wm. Gegenheimer, Inc.
C. W. Gorton
John Griffiths Company, Inc.

H
Hacker Manufacturing Company
Hamilton Mfg. Company
Hammond Machine Builders Co.
Harris-Seybold-Potter Company
C. B. Haywood
Heidelberg Printing Mach. Corp.

I
Intertype Corporation

K
Kohler Brothers

L
Lanston Monotype Machine Co.
Max Levy
Liberty Folder Company
Lindbladh Corporation
Ludlow Typograph Company
Otto Ludwig Printers Supply Co.

M
Matrix Contrast Corporation
J. L. McKettrick
Mergenthaler Linotype Company
Miehle Printing Press & Mfg. Co.
Miller Printing Machinery Co.
Montgomery & Bacon
Morgan & Wilcox
E. G. Myers

N
New Era Manufacturing Co.

O
Ostrander-Seymour Company

P
Printers Mat Paper Supply Co.
Printing Machinery Company

R
F. F. Rosback Company
H. B. Rouse & Company
Joseph A. Ryan

S
J. H. Schroeter & Brother, Inc.
Chas. N. Stevens Company
T. W. & C. B. Sheridan Company
Simcoe Manufacturing Company
Smyth Manufacturing Company
Southeastern Supply Co.
Southworth Machine Company

T
Teletypesetter Corporation

U
U. P. M. Kidder Press Company

V
Vandercook & Sons Co.

W
Webendorfer-Wills Company
F. Wesel Manufacturing Company
W. S. Warnock Company
John Waldron Corporation
Wanner Company
The Willsea Publishing Co.

Z
Zimmer Printers Supply Co.

Latest Printing Equipment Mechanisms

Rubber Roller Grinding-Maintenance Lathe

It is announced that a new rubber roller grinding lathe has been brought out recently by the Sebastian Lathe Company, Cincinnati, Ohio. The lathe may be changed quickly from a rubber roller grinding machine into a standard lathe for general plant maintenance work or vice versa.

The rubber printing press roller equipment includes special brackets, special spindle and split hinged bearings for tail and headstock; grinding wheel truing attachment with dresser; electric grinding attachments with suction exhaust; special collet chuck, having three collets, 1 in., 1¼ in. and 1½ in., respectively.

The bushings and journals, into which the rubber roller stocks are laid, are split and hinged. Collets are put into the collet chuck according to the size of the roller stock bearings.

The suction exhaust draws off practically all of the waste material.

To switch from the grinding to the polishing operation, it is only necessary to release the grinding mechanism at the headstock and put on a belt from the motor up to the pulley on the spindle in order to obtain a polishing speed of 1200 r.p.m.

A coarse-grained, rubber bonded wheel is furnished as part of the equipment.

The operation of grinding rollers consists of first using the electrical grinder at worked-out speed and feeds. The roller is then polished by hand at 1200 r.p.m. For polishing, the roller is covered with powdered soapstone. Then 120-180 and 240 grit aluminum oxide coated cloth is held by hand against the roller with a piece of leather between the operator's hand and the polishing cloth. The soapstone can be put on with a brush and rubber over by hand.

It is claimed that the finish on rubber rollers which have been ground and polished on this equipment according to directions is almost perfect and no marks or lines appear on the finished surface when inspected through a magnifying glass.

The swing of the lathe is 16½ in., length of bed is 14 ft., distance between centers, 133¼ in. The lathe has eight-speed geared head, quick change, including motor drive and switch and apron control for starting and stopping.

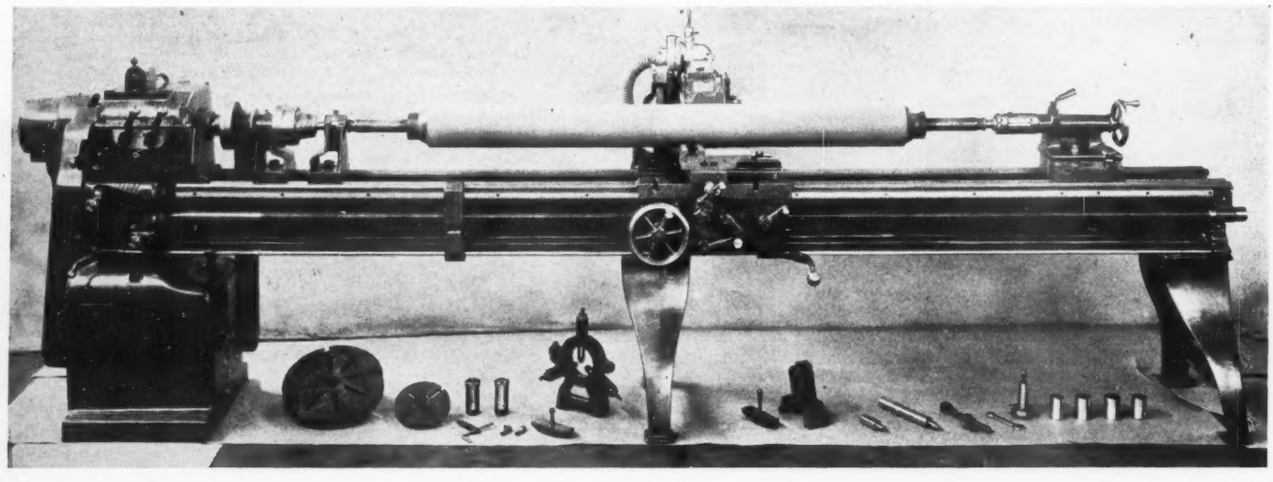
Further particulars may be obtained from The Sebastian Lathe Co., Cincinnati, Ohio.

Franklin No-Makeready Blanket

The Russell Products Co., is making a new product known as the Franklin No-Makeready Blanket. The new equipment is designed to take the place of tympan sheets and the usual packing materials used on flatbed, duplex and rotary presses. For small edition newspapers, publications and commercial job work the blanket is used in conjunction with a wave felt under-blanket. No other draw sheets or packing are used.

The new blanket is in appearance similar to a sheet of oilcloth. The surface is both smooth and level, while the body of the blanket is soft and pliable. These qualities, it is claimed, are combined with exceptional toughness, non-abrasiveness and resiliency, and as a result the blanket will not scratch, stretch or form into a matrix. The surface, having no affinity for ink, does not offset. The chief qualities of the felt under-blanket are full resiliency and lack of stretch.

Continued on page 17



Recently Issued Printing Patents

Printed copies of patents are furnished by the Patent Office at 10 cents each. These may be obtained by addressing the Commissioner of Patents, Washington, D. C.

1,919,283. INK FOUNTAIN DIVIDER AND PAD. Martin J. Troy, Atlantic Highlands, N. J. Filed Dec. 22, 1931. Serial No. 582,560. 9 Claims. (Cl. 101 — 210.)

1. A pad for use with an ink fountain compartment wall and roller to prevent leakage between compartments comprising a strip portion and a pad portion made of pliant material and means for joining the portions to provide a relatively firm point, between a corner of the compartment wall and the roller.

1,919,456. ROLL STAND FOR PRINTING PRESSES. Otto R. Wolf, River Forest, Ill., assignor to The Tribune Company, Chicago, Ill., a Corporation of Illinois. Filed July 8, 1929. Serial No. 376,569. 2 Claims. (Cl. 242 — 64.)

1. A roll stand for printing presses, comprising a supporting frame, a shaft journaled therein, a pair of arms fixed to the shaft, a second pair of arms loose on the shaft, each pair of arms being adapted to support a web-roll, a motor for rotating the shaft, a separate motor for rotating the loosely mounted pair of arms relatively to the other pair, one arm of each of the pairs being adjustable with respect to the other, and adjustable driving connections between the last mentioned motor and the arms driven thereby for rotating the arms in any adjusted position thereof.

1,919,462. MULTICOLOR PRINTING PRESS. Leslie William Claybourn, Milwaukee, Wis., assignor to Claybourn Process Corporation, Milwaukee, Wis., a Corporation of Wisconsin. Filed July 28, 1930. Serial No. 471,260. 5 Claims. (Cl. 101 — 174.)

1. In a multi-color printing press, the combination of a single impression cylinder, a plurality of plate cylinders arranged at one side of the impression cylinder to cooperate therewith, a plurality of plate cylinders arranged at the other side of the impression cylinder to cooperate therewith, inkers for each of the plate cylinders, sheet feed and delivery devices, cooperating with the impression cylinder and arranged adjacent the upper portion thereof between the upper ones of the plate cylinders above mentioned, the lower of the plate cylinders at each side of the impression cylinder being spaced apart to provide free access to the impression cylinder at the bottom portion of the press.

1,919,498. DEVICE FOR USE IN MIXING PRINTER'S INK. Harry A. Bragg, Seattle, Wash. Filed Feb. 16, 1931. Serial No. 516,154. 14 Claims. (Cl. 33 — 1.)

2. A device comprising a table bearing a series of concentric circles, a pair of hingedly connected plates constituting an angular divider, and means supporting and guiding the divider for movement downward into operative position, in contact with the table, with its hinge axis in registry with the center of the circles, and away from such operative position.

4. A device as in claim 2, the supporting and guiding means including an arm upon one end of which the divider is supported, means supporting the other end of the arm for movement of the divider towards and from the table, and for swinging movement away from the center of the circles, the supporting and guiding means also including a member notched to receive the arm and thereby to exactly position the hinge axis of the divider in registry with the center of the circles, the member inclined downwardly away from the notch to maintain the divider elevated above the table and to cause it to swing laterally away from the center of the circles.

1,920,178. TRAVELING OFFSET WEB CONTROLLING MECHANISM FOR MULTICOLOR PRINTING PRESSES. Howard M. Barber, Pawcatuck, Conn., assignor to C. B. Cottrell & Sons Company, Westerly, R. I., a Corporation of Delaware. Application July 1, 1931. Serial No. 548,137. 15 Claims. (Cl. 101 — 417.)

15. In a multicolor web perfecting rotary printing press, a printing unit, a traveling offset web, its rewinding mechanism, and an offset web controlling mechanism having a positively driven roll around which the offset web passes before reaching the printing unit and other positively driven rolls around which the offset web passes after it leaves the printing unit, to exert tension tending to slightly retard the web, the offset web controlling mechanism including a manually adjustable variable speed drive.

1,920,295. SHEET FEEDING MECHANISM. Edward F. Dudley, Oak Park, Ill., assignor to the Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Application June 15, 1928. Serial No. 285,617. 15 Claims. (Cl. 192 — 128.)

15. In a printing press, the combination of sheet feeding means, an impression cylinder oscillating sheet transfer means arranged to engage a sheet while at rest on the sheet feeding means to convey it to the cylinder, and pneumatically controlled mechanism operatively associated with the transfer means whereby the operation of the press is interrupted when a sheet is not in proper register.

1,920,388. SHEET-FEEDER. Charles W. Harrold, Cleveland, Ohio, assignor to Harris-Seybold-Potter Company, Cleveland, Ohio, a Corporation of Delaware. Application November 19, 1930. Serial No. 496,616. 20 Claims. (Cl. 271 — 30.)

1. In a sheet-feeder, sheet-forwarding means and suction means for separating and advancing a sheet from a pile to the forwarding means, the suction means being moved forwardly and downwardly beneath the sheet when the sheet is under control of the forwarding means.

1,886,730. PRINTING PRESS. Edgar Ellsworth Phinney, West Orange, N. J., assignor to Defiance Manufacturing Corporation, Orange, N. J., a Corporation of New York. Filed Jan. 16, 1932. Serial No. 587,015. 1 Claim. (Cl. 101—97.)

In a printing press; a spring paper grip, a yieldable member adapted to resist movement of the grip to active position, and a reciprocatory paper feed device normally restraining the yieldable member and adapted to free the same as the paper is fed to printing position.

1,886,762. PRINTING PRESS STRUCTURE. Isidor Tornberg, Plainfield, N. J., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed Jan. 4, 1930, Serial No. 418,490. Renewed Mar. 31, 1932. 3 Claims. (Cl. 270—5.)

1. The combination with a web printing press and its frame, of an entirely separate independent structure out of contact with the frame and means on the structure for supporting a reel for carrying the web rolls for supplying the press with paper, whereby the vibrations of the reel will not be transmitted directly to the press.

1,886,772. MATRIX ASSEMBLY FOR TYPESETTING MACHINES. Harry E. Williams, Olean, N. Y. Filed Mar. 7, 1932. Serial No. 597,333. 5 Claims. (Cl. 199—47.)

1. A matrix assembly including a stick having a slug receiving space, a filler slug in the space, means on the slug for engaging the stick to detachably support the slug, and a seat on the slug below the upper face thereof for engaging a portion of an undersize matrix slug when inserted into the space and supporting the matrix slug with its upper face substantially flush with the upper face of the filler slug.

1,886,817. DRY PLATE PROCESS PRINTING. Clarence L. Johnston, Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario, Canada. Filed Nov. 19, 1927. Serial No. 234,331. 20 Claims. (Cl. 41—41.5.)

3. A printing plate having a thin layer of silver and an overlying thin layer of nickel.

1,886,923. WORK SUPPORTING ATTACHMENT FOR PROOF PRESSES. Edward O. Vandercook, David D. Vandercook, and Frederick R. Vandercook, Evanston, Ill., assignors to Vandercook & Sons, a Co-partnership consisting of Robert O. Vandercook, Edward O. Vandercook, David D. Vandercook, and Frederick R. Vandercook, Evanston, Ill. Filed June 1, 1931. Serial No. 541,208. 11 Claims. (Cl. 271—61.)

1. The combination with a press, of a table mounted on the press carriage for supporting stock to be printed, a plate forming an extension to the feed board of the press, and a delivery plate extending from the feed board extension for receiving the printed sheet.

1,894,850. ATTACHMENT FOR PRINTING PRESSES. Charles S. Carlson, Dumont, N. J. Filed Oct. 29, 1930. Serial No. 492,064. 3 Claims. (Cl. 164 — 67.)

1. An attachment for printing presses, including a slicer, a roll over which the sliced paper is fed, pressure rollers engaging the paper above the roll, and rotatable thereby and located at opposite sides of the slice and compelling both sections to move longitudinally and preventing lateral movement thereof, endless tapes between which the paper is fed over the roll, the rolls supporting and imparting motion to the tapes, and a sprocket chain connecting the sprocket wheels on one of the tape rolls with the first mentioned roll.

1,903,507. PRINTING UNIT. Frank C. Frolander, Elizabeth, N. J., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Oct. 21, 1930. Serial No. 490,141. 21 Claims. (Cl. 276 — 43.)

1. A galley adapted to be placed in a printing press, the galley containing printing slugs of substantially less than standard type height and presenting means rigidly secured to and forming a permanent part of the galley and adapted to anchor the individual slugs against vertical displacement, in combination with a chase adapted to support the galley at the standard type-high level.

1,903,528. COMBINING SLUG GAUGE AND THICKNESS TRIMMER. Charles W. Curle, San Francisco, Calif. Filed May 26, 1930. Serial No. 455,664. 2 Claims. (Cl. 90 — 19.)

1. In a slug trimming device, a support, a stationary guide positioned on the support, a movable guide positioned on the support and arranged parallel to the first mentioned guide, means for moving a slug between the guides, a slider secured to the movable guide, the slider having teeth formed thereon, a stepped gauge movably mounted on the support, teeth formed on the gauge, gearing interposed between the teeth on the slider and the teeth on the gauge, a cutter mounted on the support, a stop carried by the cutter, the stop being in alignment with one of the steps of the gauge, and means for retaining the stop in engagement with its step while the cutter is being actuated.

1,887,917. STEREOTYPE PLATE CASTING MACHINE. Ernst Brockel, Augsburg, Germany. Assignor to Maschinenfabrik Augsburg-Nurnberg A. G., Augsburg, Germany, a Corporation of Germany. Filed Sept. 23, 1931, Serial No. 564,485, and in Germany Oct. 3, 1930. 5 Claims. (Cl. 22—2.)

1. A casting machine of the character described comprising, in combination, a melting pot, a mould, a valve casing having a valve chamber in communication with the upper end of the mould, a molten metal supply pipe opening at one end into the pot below the level of the metal therein and at its other end into said valve chamber, a container for molten metal located above the valve casing and opening at its lower end into said valve chamber, a source of sub-atmospheric pressure connected with the upper end of said container, means for cutting off communication between said container and said source of sub-atmospheric pressure and for establishing communication between the upper end of said container and a higher pressure at least as high as atmospheric pressure, and a valve within said valve chamber movable to a position to establish communication between said pipe and said container and to simultaneously deny communication of both said pipe and said container with the mould, and also to another position in which communication of the pipe with both the container and the mould is denied and communication is established between the container and the mould.

1,888,109. COMPOSITION AND PROCESS FOR RUBBER BLANKET PRINTING. George W. Bennett, Cincinnati, Ohio. Filed Sept. 5, 1930. Serial No. 480,025. 9 Claims (Cl. 41—25.5.)

1. A composition of matter adapted for being applied to the face side or rear side of rubber printing blankets, the same being a liquid containing as a vehicle, a liquid mineral oil product less volatile than gasoline and more volatile than spindle oil, spirits of turpentine, a penetrating oil consisting largely of hydrocarbons, oil of sassafras and oil of cloves, such vehicle carrying small amounts of powdered sulphur and powdered orris root.

1,888,194. VALVE MECHANISM FOR SUCTION FEEDERS. Albert Broadmeyer, Harrisburg, Pa., assignor to W. O. Hickok Manufacturing Company, Harrisburg, Pa., a Corporation of Pennsylvania. Filed Nov. 15, 1929. Serial No. 407,547. 15 Claims. (Cl. 271—27.)

1. In sheet feeding apparatus, the combination with a support for a pile of sheets, of a suction device for removing sheets from the pile, a nozzle for delivering a current of air to the pile to elevate the top sheets for action on by the suction device, an air pump, a conduit connecting the suction device and nozzle and including the pump, to cause the pump to withdraw air from the suction device and deliver air through the nozzle, a valve casing in the conduit, a valve in the valve casing movable between a position to close the conduit and a position to open it, mechanism for periodically moving the valve to one of said positions, and means for automatically freeing the valve from said operating mechanism and causing it to move from said position to its other position independently of the operating means.

1,912,488. PRINTING PRESS GAUGE. Eugene Memmler, Los Angeles, Calif. Filed Apr. 5, 1932. Serial No. 603,292. 7 Claims. (Cl. 101 — 348.)

1. In a printing press, the combination with a type form and an inking roller, of a stepped gauge in the form adapted to be engaged by the roller and indicate the impression of the roller on the type.

1,912,506. WEB CHANGE DEVICE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a Corporation of Virginia. Filed July 29, 1930, Serial No. 471,461. Renewed Mar. 17, 1932. 30 Claims. (Cl. 242 — 58.)

30. In a mechanism for splicing web rolls, the combination with a movable frame and a rotatable reel for supporting paper rolls, of a switch adapted to stop the reel in a position for splicing, and means controlled by the movable frame for resetting the switch to allow the reel to resume its rotation.

1,912,527. METHOD OF AND MECHANISM FOR SUPERIMPOSING A SHEET UPON AND ATTACHING IT TO A SELECTED BOOK SECTION OR THE LIKE IN A SHEET PASTING MACHINE. Oscar Kleinschmit and Walter Geissler, Leipzig-Plagwitz, Germany, assignors to Gebruder Grehmer, Leipzig-Plagwitz, Germany. Filed May 27, 1931, Serial No. 540,440, and in Germany Sept. 10, 1930. 21 Claims. (Cl. 154 — 42.)

1. A method of connecting individual sheets in a sheet-pasting machine, which consists in feeding the sheets along paths in different planes, superimposing one sheet on the other during the joint feed thereof, upwardly deflecting a portion of the superimposed sheet, applying adhesive to the underside of the deflected portion, and bringing the sheets together.

1,913,304. PAPER CUTTING AND TRIMMING MACHINE AND SAFETY MECHANISM THEREFOR. Edward M. Brackett and Dietrich Daneke, Topeka, Kans., assignors to The Brackett Stripping Machine Company, Topeka, Kans., a Co-partnership of Edward M. Brackett and Fred M. Brackett. Original application filed Apr. 30, 1928, Serial No. 273,967, and in Canada July 30, 1930. Divided and this application filed Apr. 8, 1931. Serial No. 528,590. 9 Claims. (Cl. 192 — 135.)

1. In a cutting machine having a movable knife, the combination of knife-operating means comprising gear and clutch mechanism adapted for operative connection with the knife, means for enclosing and shielding the knife and knife-operating mechanism, the shielding means comprising a movable closure member, tripping mechanism operatively connected with the clutch mechanism, and locking means operatively connected with the tripping mechanism and adapted to be engaged and released by the action of the movable closure member, for locking the tripping mechanism against rotation when the shielding means is unclosed.

1,915,491. FEEDING DEVICE FOR DELIVERING METAL TO THE POTS OF TYPE CASTING AND LIKE MACHINES. Carl Wilhelm Hartmann, Lyngby, near Copenhagen, Denmark, assignor to Funditor Limited, Longon, England. Filed July 6, 1931, Serial No. 548,928, and in Great Britain July 11, 1930. 5 Claims. (Cl. 22 — 80.)

1. In mechanism for feeding type bar metal into the melting pot of a type casting machine, a cover member mounted on top of the pot, a vertical guide for the type bar carried by the cover member, a horizontally slidable abutment on the guide adapted to successively engage successively arranged abutments in the type bar and thereby to release it a predetermined amount, a pivoted arm the pivot of which is carried by thk abutment, a float controlled stop engaging the arm and a fixed abutment located in the path of the arm adapted to engage the arm and to cause horizontal sliding movement of the type bar engaging abutment, the arrangement being that when the level of molten metal in the pot falls the arm is pivotally moved by the falling float to a position in the path of the fixed abutment so that when it engages the fixed abutment it is slid relatively to the type of bar guide and slidably carries the type bar engaging abutment with it from one abutment in the type bar to the next in succession.

1,915,837. PRINTING PRESS. George M. Porter, New York, N. Y. Filed June 8, 1931. Serial No. 542,766. 8 Claims. (Cl. 101 — 204.)

1. In an inking mechanism for printing presses, the latter including a flat ink plate, an ink fountain, a fountain roller, groups of ink pick-up and form rollers, the groups including distributing rollers; ink fountain separating means removably associated with the ink fountain and the fountain roller, the means comprising rectangular grooves in the bottom wall of the ink fountain, corresponding grooves in the fountain roller and partitions removably but snugly set within the fountain grooves and extending into the fountain roller grooves to effectively prevent co-mingling of the inks in the respective compartments formed by the partitions, and ink separating provisions arranged with the plate and the distributing rollers.

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1,918,376. LINE SAFETY DEVICE FOR TYPOGRAPHICAL MACHINES. Worth Medly Bryars, Merced, Calif. Filed Feb. 3, 1932. Serial No. 590,746. 10 Claims. (Cl. 199 — 52.)

1. In a typographical composing and casting machine, the combination of an assembling elevator wherein the matrices are composed in line at different levels and including an adjustable rail to fix the level of composition, a vise cap, an intermediate transfer channel, a first elevator filling piece, and an automatic line safety device carried by the vise cap and the intermediate transfer channel and including a means at the lower end of the intermediate transfer channel normally extending into the assembling elevator in the path of the aforementioned adjustable rail when the latter is in position to support the matrices at a second level and means cooperable with the filling piece during movement thereof for actuating the device to clear the dog from the rail when the latter is in the last mentioned position.

1,918,517. PRINTER'S BLANKET. William C. Calvert, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Feb. 17, 1930. Serial No. 429,205. 12 Claims. (Cl. 154 — 54.5.)

1. A printer's blanket comprising a heavy woven textile material having felted surfaces thereon, rubber coatings upon the felted surfaces, cement coatings upon the rubber surfaces and an outer coating of regenerated cellulose upon the cement.

6. A printer's blanket comprising a body having secured thereto a coating of regenerated cellulose containing polyglycerol.

1,918,627. APPARATUS FOR PRODUCING PRINTING FORMS. Ernest S. Ballard, Oakland, Calif., assignor, by mesne assignments, to Standard Process Corporation, Chicago, Ill., a Corporation of Delaware. Filed Apr. 16, 1928. Serial No. 270,367. 5 Claims. (Cl. 204 — 6.)

1. An apparatus for forming or removing a shell-like printing surface on or from a cylindrical base, comprising a receptacle, a cylindrical base constituting an electric pole, means to rotatably support the cylindrical base in the receptacle with a portion extending beneath an electrolyte solution, a plate constituting an electric pole and having a curved portion and a continuous uninterrupted surface extending substantially parallel to and coextensive with the surface of that portion of the cylindrical base that is disposed beneath the level of the electrolyte and terminating below the surface at the side of the base that moves downwardly upon rotation so that rotation of the base causes circulation of the electrolyte over the immersed edge of the plate.

1,918,629. MATRIX-SETTING AND TYPE-LINE-CASTING MACHINE. Wilhelm Blume, Berlin-Tegel, Germany, assignor to Firm Typograph G. m. b. H., Berlin, Germany. Filed Sept. 6, 1932, Serial No. 631,931, and in Germany Oct. 29, 1931. 6 Claims. (Cl. 199 — 18.)

1. A matrix-setting and type-line-casting machine of the type in which the matrices situated in a magazine are released by striking keys arranged on a keyboard and flexibly connected to the matrix release devices on the magazine, means for slidably mounting the keyboard for vertical movement, and means for adjusting the keyboard to the desired position of height.

1,918,829. INK PRODUCT AND PROCESS OF MAKING THE SAME. Max Baer, New York, N. Y. Filed Aug. 8, 1929. Serial No. 384,487. 7 Claims. (Cl. 134 — 135.)

1. The herein described ink product adapted for use by lithographers, label and other printers, as a ready mixed product, characterized by including as pigments chrome yellow and gold bronze in the presence of a mixture containing sulphuric acid, cresylic acid and borax.

1,918,943. HOLDER FOR DIES FOR PUNCHING STEREOTYPE PRINTING PLATES. Harry B. Ward, Springfield Gardens, N. Y. Filed Oct. 16, 1930. Serial No. 489,132. 5 Claims. (Cl. 101 — 28.)

1. A holder for dies, comprising a body having a longitudinal recess in its underside adapted to receive a plurality of removable dies; an anvil on the upper side of the body; side plates closing the sides of the recess and having projections on their inner faces corresponding in contour to the side contour of the recess and extending thereinto; and means for clamping the dies in the recess.

1,923,116. SLUG-FORM BINDING. William H. Ritenour, Pittsburgh, Pa. Application July 15, 1931. Serial No. 550,825. 4 Claims. (Cl. 101 — 404.)

2. A type-form comprising a plurality of character slugs and spacing strips, the type-form having a continuous series of holes formed in the bodies of the slugs and spacing strips, in combination with a pair of relatively narrow rods suspended through the holes and bearing fastening means on either end, whereby the slugs are securely fastened only at right angles to their lengths, substantially as described.

4. The type form described in claim 2, in combination with the head and foot slugs, bearing notches, the lower edges of the notches being adapted to engage the fastening means and prevent sufficient displacement that would allow them to rise to printing position, in the manner and for the purpose described.

1,923,218. CASTING OF PRINTING FURNITURE. Basil Monrad Lanser, Sydney, New South Wales, Australia. Application September 18, 1931, Serial No. 563,610, and in Australia April 1, 1931. 2 Claims. (Cl. 199 — 55.)

1. Means for the casting of slugs for use as furniture, comprising a mold body, a mold cap therefor, the mold cap being provided with spaced ribs extending from the rear to the front of the mold cavity and certain of the ribs being cut away, and a liner disposed beneath the cut away portion of the mold cap for forming a step in the slug cast in the mold body.

1,923,339. WEB PASTING DEVICE. Allen B. Staiger, Atlantic City, N. J. Application August 21, 1930. Serial No. 476,768. 4 Claims. (Cl. 91 — 51.)

1. A web pasting device, comprising a paste container, a paste-applying roll extending into the container, a bracket carried by the container and rotatably supporting the roll, and a gravity-actuated weight oscillatably carried by the bracket and extending parallel with the axis of the roll, to frictionally engage a paper web and remove wrinkles and yield in accordance with the stiffness of such web to maintain the web in substantially uniform frictional engagement with the roll.

1,923,492. PRINTING MACHINE. Joseph Krell, Berlin-Zehlendorf, Germany. Application January 13, 1932, Serial No. 586,391, and in Germany January 23, 1931. 4 Claims. (Cl. 101 — 65.)

1. A printing machine comprising a rocking printing arm, means for actuating the arm, a paper holder, means for feeding the paper holder longitudinally and transversely, a feed-controlling member on the printing arm, means for operating the member at each ascent of the printing arm, a rocking lever opcratively connected to the feeding means, and a connection between the member and the rocking lever which is adapted to rock the lever only during the ascent of the printing arm.

1,923,628. GALLEY MECHANISM FOR MONOTYPE MACHINES. Frank J. Lemieux, Central Falls, R. I. Application September 13, 1932. Serial No. 632,963. 8 Claims. (Cl. 199 — 95.)

1. The combination with a type casting, composing and setting up machine having a type channel-way, a galley support, a type channel block and a trip lever mechanism, of a means operable by the movements of the type in the channel-way pivoted to the type channel block for controlling the trip lever whereby the trip lever may be controlled to operate the machines at predetermined intervals.

1,923,671. COMPOSER PRINTING MACHINE. William C. Huebner, Chicago, Ill. Application September 19, 1932. Serial No. 633,729. 7 Claims. (Cl. 95 — 73.)

1. In a machine, the combination with a base; of means for supporting a print-receiving element in position; a supporting member adapted to have a print-producing element attached and retained in a relatively fixed relation with respect to the member; and means for adjusting the member with a print-producing element in fixed relation thereto, in two directions at right angles to each other in a plane parallel to the print-receiving element.

1,923,823. MATRIX STICK. Arthur H. Hedly, Chicago, Ill., assignor to Ludlow Typograph Company, Chicago, Ill., a Corporation of Illinois. Application June 29, 1932. Serial No. 620,007. 8 Claims. (Cl. 199 — 47.)

1. A matrix stick comprising a frame portion for receiving the matrices, and means for clamping the matrices in the frame portion comprising a threaded rotatable shaft, a member at the side of the shaft and movable toward and away from the shaft, threads on the member and shaft and yielding means urging the member into engagement at its thread with the thread on the shaft, the shaft and member being relatively slidable in a direction lengthwise of the shaft toward matrix-clamping position and the threads being so shaped as to permit the member to idle in the relative movement of the shaft and member.

1,923,910. PRINTING PRESS. Martin W. Brueshaber, River Forest Ill., assignor to The Goss Printing Press Co., Chicago, Ill., a Corporation of Illinois. Application July 29, 1932. Serial No. 625,723. 17 Claims. (Cl. 101 — 180.)

1. In a printing press, the combination of a plurality of press units each comprising two printing couples for printing both faces of a web, an auxiliary impression cylinder and a plurality of cooperating form cylinders in spaced relation to each other about the impression cylinder at one side of the press for making an outside face color printing on a portion of any selected one of the webs from the press units, a second auxiliary impression cylinder and a plurality of cooperating form cylinders in spaced relation to each other about the impression cylinder at the opposite side of the press in axial alignment respectively with the first named auxiliary cylinders and in position to make an inside face color printing on a complementary web portion from the press units, and means for driving the auxiliary cylinders serving to rotate the cylinders at one side of the press in the reverse direction from that of those at the opposite side of the press.

1,932,925. PRINTING PRESS. Harland Fankboner, Chicago, Ill., assignor to The Goss Printing Press Company, a Corporation of Illinois. Application January 14, 1931. Serial No. 508,651. 6 Claims. (Cl. 101 — 378.)

1. A curved printing plate having a concave rear face provided with circumferentially extending ribs, certain of the ribs being interrupted intermediate their ends to provide a sharp shoulder.

1,924,171. DEVICE FOR SWAGING SAW TEETH. Walter C. Tesch, Milwaukee, Wis. Application June 12, 1931. Serial No. 543,845. 4 Claims. (Cl. 76 — 53.)

1. A saw swaging device including a base, means for movably clamping a saw thereto, a movable plunger carried by the base for engaging the teeth of a saw, a movable hammer member having an annular shoulder, an eccentrically mounted collar having a lateral projecting finger for engaging said shoulder to impart movement to the hammer in one direction, a coil spring engaged by the hammer when the same is moved in one direction whereby the coil spring is compressed so that the tension of said spring will urge the hammer toward the plunger upon disengagement of the finger from the shoulder, means for manually actuating the collar and means operated in conjunction with the hammer for engaging the saw teeth to advance the saw past the plunger after operation of said plunger.

1,924,328. BLANKET FOR PRINTING PRESSES AND METHOD OF MAKING THE SAME. Thomas L. McElroy, Brooklyn, N. Y. Application December 2, 1930. Serial No. 499,603. 6 Claims. (Cl. 154 — 2.)

1. A fabric blanket for printing presses impregnated with lycopodium.

2. A method of manufacturing blankets for printing presses, consisting of vulcanizing rubber to a face of a fabric, steaming the fabric, spraying the fabric with a moisture resistant, and rolling the fabric.

1,924,583. QUICK CHANGE SPLICING DEVICE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application June 15, 1927, Serial No. 198,981. Renewed January 11, 1933. 18 Claims. (Cl. 242 — 58.)

1. In a web splicing mechanism, the combination with means for supporting a movable web roll, means for rotating it up to web speed, feeding belts for the web roll, and means for moving one strand of the feeding belts up to the fresh web roll for splicing the old web to the web on the fresh roll.

1,924,584. PRESS UNIT DRIVE. Henry A. Wise Wood, New York, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Origina application February 18, 1926, Serial No. 89,070, now Patent No. 1,883,256, dated October 18, 1932. Divided and this application April 10, 1930. Serial No. 443,082. 4 Claims. (Cl. 270 — 5.)

1. The combination with a plurality of press units, each having a horizontal shaft parallel with the axes of the printing couple thereof, of a direct rigid connection between said shafts of two units which are in alignment with each other, and a main shaft directly connected with one of the driving shafts for driving it.

Letters to the Editor

"KISS" VS. "IMPRESSION"

Ever and anon a fellow ambles into our workshop and after squatting on the official throne (our only and patched chair), delivers himself of a statement that is final, binding and correct to the limit of his intelligence or may be his intellectual experience, as it were.

The latest announcement (and on this subject he has many theoretical followers) was that those who printed newspapers should do it with the "kiss" method (whatever that is) and not with the good ol' "sock" known to the highbrow as impression.

Between mouthfuls of rare advice he raved about the wonderful appearance of our paper, how beautiful, and so on, but all the time we should use the "kiss method" and there was dumb me wonderin' howin'ell we could do any printing if we took off that good old twelve thousandth blow we were hitting the plate with every time it came up for air.

'Course, we can't say anything to some of these birds, but we can't help wondering how this "kiss" impression method when applied to newspaper reproduction is going to go down into the face of this very changeable plate and drag a good print out of its features which are more rugged under the glass than a section of the Alps. May be he means a different kind of kiss than we have in mind. Maybe it's a soul kiss that he would employ to search the cavernous depths of the average stereotype plate which will have variations up to as high as nine one thousandths inch. This "kiss impression" stuff is a whole lotta bunk and even in plants where the printing and impression surfaces are as near perfect as human ingenuity can make them we notice the old "bumping up" machine always in the offing.

You've got to have impression and lots of it to print newspapers legibly and that impression should start no farther down the line than in the stereotype room. The mat should be given as deep a squeeze as the fibres will permit. With a good deep plate the pressman has a chance for his agate in the reproduction of printed matter in a legible and artistic manner.

Herman, hand me the impression pin!

Fraternally yours,
IMPRESSION PETE.

MORE ABOUT MORTISING MATRICES

Some time ago I read with interest in your practical magazine what Mr. Cobb had done in making emergency vertical slug figures in linotype matrices. The following may be of interest:

In our periodicals we use with our linotype composition initials of Monotype Cochin Outline, etc. I like to see quotation marks used with an initial when they are called for, that there may be no misunderstanding on the part of the reader. To use hand-type beginning quotes is impractical. Therefor I took a 12-pt. double-quote linotype matrix and inserted the punched character of it sideways in a good-sized em quad matrix in the same way that Mr. Cobb inserted his

"HAVE you ever aspired to be the author of a book, or of many books? I have; but thus far the world has

figures sideways. The tails of these beginning quotes extend to the left-hand end of the slug as it is cast. This permits the slug to be placed vertically along the left-hand side of the page with the *smooth* side of the quote slug against the ends of the slugs and the initial in the column, the quotes hanging in the margin. This 12-pt. quote used with a 36-pt. initial and body matter in 9-pt. appears to be as near the correct weight as we could get. It is a little work for the make-up man to line up these quotes with the initial, and the stone man must allow for the quote slug in the gutter; but we believe the results justifies the work.

Most truly yours,
ARTHUR W. BROWNE.

Palo Alto, Calif.

COMPOSING MACHINES AND TRUCKS

Recently I attended a convention composed of newspaper and job printers, and at a gathering of this sort you will always find representatives of nearly all the printing equipment firms within hailing distance. Besides the real business, one always finds groups here and there making comparisons of conditions in their individual locality, swapping stories of one sort or another, telling of their handicaps, etc.

It so happened that I was seated with a group of linotype operators in a hotel room. One of this number was a Linotype representative. The operators were telling their "troubles" to him, in the hope that in his travels he would go to their particular shop and try and have the boss remedy them.

Having nothing in the way of gloom to offer to the gathering, I listened attentively to what each one had to say (and some of their "kicks" seemed pretty bad) until I felt it was my turn to chime in.

I said: "What do you fellows think of a plant of machines, where there is not an average of one distributor stop per machine in the course of a day's work?"

"There ain't any such animal!" was the first reaction, as one of the boys stated that he had a full hundred in the run of a night.

"Well, there are such animals," I responded, "and I work on one."

I am not going to tell where they are, but if any of the fellows who were present should read this they will recall the incident.

There are fifteen machines in the plant where I work, four Intertypes, and the remainder are Linotypes. When I first went to this plant the machines were in poor condition and squirts were plentiful. In the first place, fifteen machines are too many for one man to care for. That was very evident. There were distributor stops, squirts, and whatnot in such an abundance that the operators could not concentrate uninterruptedly on their work for any length of time. This retarded production, and had the foreman and the fellow on the copy desk "up in the air" most of the time.

This condition continued for some time until a change of machinists came about, and then things began to happen. This new machinist is a genius when it comes to line-casting machines. He finds it a pleasure to do things for the operators. One of the first things the management did for him was to electrify the metal pots, and he followed this by changing the machine layout so as to aid production and to enable him to care for them in a better way.

He was—and still is—a perfect salesman. And by that I mean he can always sell the management an idea if he feels it means better and more production. There is not a new device put on the market that he does not try out, even if he only gets one machine thus equipped, and if it proves itself worthy he adds it to all of them.

One of the unique additions is a tray in which operators may place smoldering cigarettes or cigars. Heretofore these were placed on the tray near the copy holder, and the ashes filtering down into the keyboard caused trouble. He has an orderly work schedule to which he strictly adheres, so that almost once a month each machine has been given proper attention. He supplies plenty of mats (there is never a shortage) and his adjustments are such that it is safe to say not a half-dozen

mats a month are damaged. This is a plant in which the operators find it a pleasure to work, and the foreman now has peace of mind because he can depend upon the machine output.

However, the thing that "gets" me is why some plants do not secure experts to care for these delicately adjusted pieces of machinery. In my own way I have visualized these plants who employ motor trucks to deliver newspapers. In their garages one will find, as a rule, plenty of help so these trucks will never fail. Why is this condition absent in composing rooms? And well the heads of these plants know the difference in cost between a composing machine and truck.

I will end this little tale by saying again that there are perfect machines and perfect machinists, but they are few, and if I were asked to solve the problem of slow machine production in some composing rooms I would say give your operators a real machinist to work with, give him plenty of material, and lest this be forgotten, give him a salary that will encourage him, for such a man is a jewel.

Very truly yours,
OPERATOR.

Books Received

"WHO'S WHO IN PRINTING IN THE UNITED STATES AND CANADA"

A good beginning for a much-needed biographical directory of well-known personages is to be found in Prof. David Gustafson's "Who's Who in Printing in the United States and Canada."

Part I of the proposed directory has been issued and consists of 72 pages, 6 in. by 9 in. with paper covers. The price is $1.00. The book may be obtained by addressing David Gustafson, Professor of Printing, Carnegie Institute of Technology, Pittsburgh, Pa.

Whether or not Professor Gustafson will continue with the work depends upon the response, given by printing executives to the publishing of Part I.

The compilation supplies intimate facts about some of the present-day prominent men in the printing industry. While the publication of Part I is not complete by any means, there are enough of printing's more outstanding names included to form an interesting and valuable collection of biographical matter for the printer's library.

THE MANUFACTURE OF PRINTING AND LITHOGRAPH INKS

In reviewing "The Manufacture of Printing and Lithographic Inks," by Herbert J. Wolfe, I originally intended to scan it for new theories, principles and truth of statement but soon found myself dwelling long over the text on many of its pages.

Methods and formulae mentioned in this book I have noted is common practice in all of the best and most up-to-date plants in the eastern part of the United States.

The requisite physical nature of inks is particularly well brought out in Chapter II.

Chapter III on Oils is the best composite outline of available materials for vehicles I have noted. It implies the vast opportunities for research and development. It incites the imagination to all sorts of possibilities for in the realm of oils lies the field of most needed improvement. Even the oil specialist will get something from this chapter.

In Chapters IV, V and VI have been brought under one head the essential elements of color pigment chemistry and the standards in the manufacturing art have been portrayed.

Chapter VII covers well the practices in working up carbons into black ink pigments and adds greatly to the written information on carbon black.

Chapter VIII enlightens us further in the theory of driers and covers the general characteristics of those in use and expresses possibilities for those not yet found practical from every standpoint.

Chapter IX covers the list of ink modifying compounds in common use. We wish the author had gone a bit more into detail as to their usefulness particularly on high-speed presses, describing their action in fountain, on rolls and plates and explain more fully the various modifying effects.

Chapter X shows the necessity for inks of suitable character for the particular kinds of presses and paper used and the quality of impression wanted. The standard for the four-color process for typographic printing is well defined.

Chapters XI and XII have covered well the planographic and intaglio printing processes dwelling upon the inks used in common practice.

Chapter XIII adequately describes modern design of factory equipment and mills in particular. Some readers may wish a more technical discussion of the chemical and physical changes brought about by the action of milling upon oils, varnishes, siccatives, etc. A little more detail might have been given about ink fountains, mixers, mills and fire prevention for high volatile inks, particularly those used in high-speed intaglio printing. These suggested additions, though, do not mean this chapter is not a real contribution to information on the subject.

Chapter XIV outlines accepted testing procedures in most laboratories which if followed quite universally would do much toward standardization in the printing art.

Chapter XV discusses the modern trend in the character of printing inks and like Chapter III is highly inspiring. It sets forth what is lacking and the lines of endeavor being followed to satisfy the deficiencies. This chapter gives full scope to the tremendous possibilities.

If someone would now bring out as complete an exposition of type and plate making, preparation of lithograph stones and their substitutes, press design, make-ready problems with the different kinds of presses, printing papers, elimination of static, air-conditioning apparatus—in other words, the mechanical aids to the art, we would have collected in two volumes information that might well serve as a text for all departments. As a matter of fact this book as it is might well be studied by the pressman as well as the chemist.—M. E. H.

THE MANUFACTURE OF PRINTING AND LITHOGRAPH INKS, *Herbert J. Wolfe*. MacNair-Dorland Company, New York, New York. Size, 6 x 9 in., 320 pages. Price, $6.00.

I. T. C. A. in Chicago

President Edward W. Libby of St. Paul has announced that the annual meeting of the International Trade Composition Association will be held on October 23 and 24 in Chicago, Ill. Headquarters will be at the Palmer House, where all business sessions will take place.

These dates immediately precede the annual convention of the United Typothetae of America which is scheduled for October 25, 26, and 27. In making the announcement, it is felt that the I. T. C. A. meetings should be held previous to those of the Typothetae in order to give the membership an opportunity of attending both meetings without interference. Most members attending the Trade Composition convention will be interested in attending the convention of the United Typothetae of America and as the dates are now arranged they can do so without losing time from either convention or attending the Century of Progress Exposition.

TRADE LINOTYPE MARK

IT'S THE FACE THAT COUNTS

PUTTING THE SCALE ON A 6 pt. MATRIX PUNCH

YES! It is done literally! How? With an ingenious machine, developed by Linotype engineers, that projects a huge image of the face of the character on a cross-line, ground-glass screen. Every Linotype punch has to pass this rigorous test . . . every one of its face dimensions checked to a tenth of a thousandth . . . before it is judged ready to punch a Linotype matrix. Most of the world's printing depends for its typographic excellence on the design of the face and the perfection of the Linotype matrix. With a responsibility like that on your shoulders, you just can't take any chances.

Printers are cordially invited to visit the Linotype matrix factory and see for themselves the procedure of design . . . the extreme precision in manufacture . . . the exacting standards of inspection that go into that small but indispensable element of the printer's equipment . . . the Linotype matrix. Fifty years of experience guides the shaping of that piece of brass.

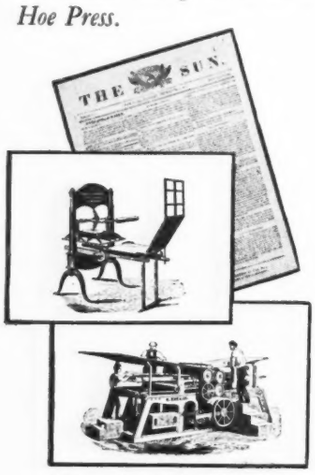
Linotype Bodoni and Metro Families

MERGENTHALER LINOTYPE COMPANY, BROOKLYN, NEW YORK

San Francisco · Chicago · New Orleans · Canadian Linotype, Limited, Toronto, Canada
Representatives in the Principal Cities of the World

In 1833

the first edition of The New York Sun was printed on a Hoe Press.



Above, the original Hoe hand operated press used for printing the first edition of *The Sun* in 1833.

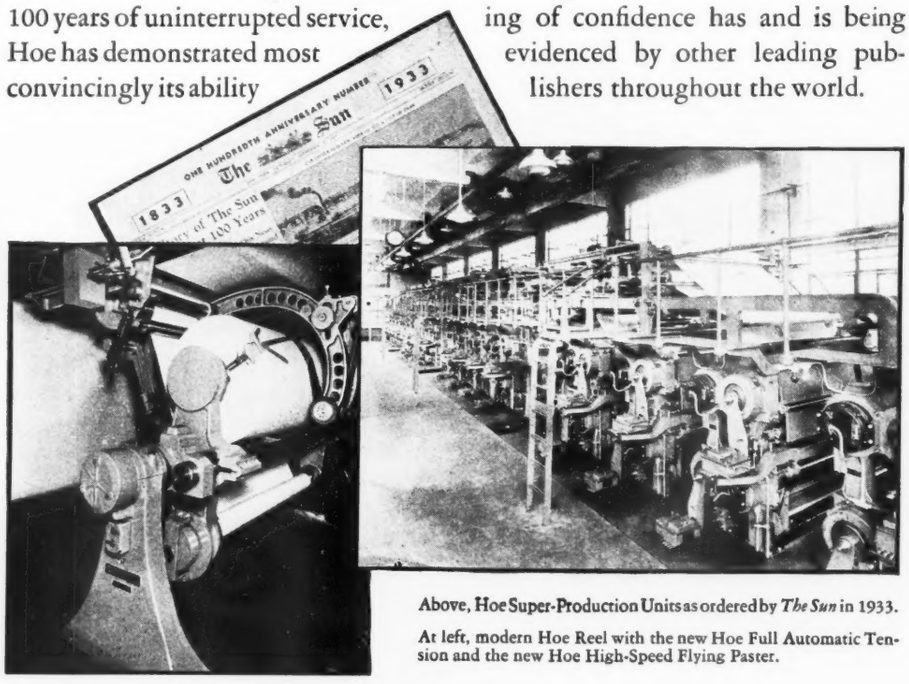
Below, a Hoe Press used for printing *The Sun* some few years later.

In 1933

after 100 years of continuous Hoe service
The New York Sun has ordered

24 of the latest Hoe Super-Production Units
6 Hoe Super-Production Folders
24 Hoe Reels with the new Hoe Full Automatic Tensions
3 new Hoe High-Speed Flying Pasters

SINCERE confidence in Hoe is expressed in this order from The New York *Sun*. Through more than 100 years of uninterrupted service, Hoe has demonstrated most convincingly its ability to develop and build the finest and most economical printing equipment. It is significant that this same feeling of confidence has and is being evidenced by other leading publishers throughout the world.



Above, Hoe Super-Production Units as ordered by *The Sun* in 1933.

At left, modern Hoe Reel with the new Hoe Full Automatic Tension and the new Hoe High-Speed Flying Paster.

IRVING TRUST COMPANY . . . RECEIVER IN EQUITY FOR

R. HOE & Co., Inc.

• *General Offices* •

138th St. and East River

• *New York City* •

BOSTON SAN FRANCISCO CHICAGO

NRA MEMBER U.S. WE DO OUR PART

The Latest Printing Equipment Mechanisms

(Continued from page 10)

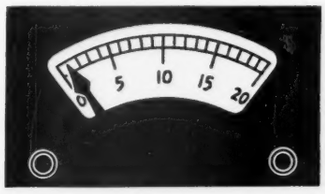
On a test, one of the new Franklin No-Makeready Blankets with felt of proper thickness has been in service on a Miehle rear-delivery cylinder press for over four months. The plant superintendent states that no makeready has been put on any job turned out on the press. The superintendent also expressed the opinion that both blanket and felt might last at least another six months, and that he had had no trouble from offsetting. The blanket has been sponged off occasionally with kerosene, though any other cleanser may be used.

The Franklin No-Makeready Blanket is the invention of H. R. Hillegas, vice president of Franklin Paper Co., Inc., and head of Russell Products Co., both of 810 Sansom Street, Philadelphia. Mr. Hillegas is also the inventor of several moulding blankets and felts for the stereotyping trade.

New Cushman High-Speed Router

The new Cushman Router which is designed for use in commercial and newspaper plants, features a direct drive from the motor head placed over the cutting tool. Although the router table is of clean design and embodies many improvements, it is claimed by the Cushman Electric Company, Concord, N. H., that the efficiency of the machine will be found in the construction of the motor.

A. L. Cushman, proprietor of the Cushman Electric Co., who is familiarly known in the printing trade as the maker of an offset motor for line-casting machines, after a study of routing problems was convinced that the primary requisites of a router are high speed, absence of vibration and ease of control.



Ammeter reading of current consumption of new Cushman Router Motor which operates at 19,000 r.p.m.

The compact and upright motor used on the new router head was designed especially to meet the needs of the engraver. Geared at approximately 1 to 4, it turns the cutting tool at about 19,000 r.p.m. A feature of the motor is the precision with which its vertical shaft is mounted in its bearings, the shaft running on eight balls at either end. A friction-tight cupping on the undersides permits the bearings to be flooded with sperm oil which insures silent and cool motor rotation under sustained usage.

Direct evidence of the motor and motor-gear efficiency is attested by the ammeter reading shown in the illustration which was taken while a Cushman Router was in operation.

The Cushman Router motor is as near vibrationless as a motor can be. While running at full speed a pencil may be balanced on its housing. Having no vibration to be absorbed, the supporting arm has been designed as light as possible and is mounted on ball bearings.

Either bar or pull may be controlled with a few ounces of pressure, and one-hand control (either left or right) is entirely practical. The amount of friction of bar on guard-rail may be adjusted by the turn of a hand screw.

The table top is 22 in. by 22 in.; height from floor to top of table is 41⅜ in. The motor is ¼ h.p. and operates on 110-220 v., A. C., 2 or 3 phase, and on D. C., 110-220 v.

Knife Grinder for the Printing Trades

The Fate-Root-Heath Company, Plymouth, Ohio, has announced a new Plymouth Knife Grinder. The machine sharpens all makes of paper and linotype trimming knives as

Announcing

THE NEW
Cushman
High-Speed
Router

The Cushman Electric Company announces its new High-Speed Router—a machine embodying many new developments. Here are some of its unique features.

The cutting tool on the Cushman Router operates at the highest speed ever applied to a commercial Router—19,000 r.p.m. It has a direct drive from a small compact, upright motor placed directly over the router bit with a vertical shaft mounted with watch-like precision in bearings at each end. This construction insures a current saving in excess of 85%. Belt elimination does away with all vibration. A pencil can be balanced on the housing with the motor at full speed.

Light supporting arms are mounted on ball bearings. A few ounces of pressure one hand, left or right, control either bar or pull. The motor head or table may be had separately. This head can be mounted on present routing tables. The Cushman High-Speed Router increases production and reduces power bills and insures accuracy.

Before buying any Router, send for complete information and prices.

THE CUSHMAN ELECTRIC COMPANY

69 South Main Street
CONCORD, NEW HAMPSHIRE

PUBLISHERS SUPPLIES

All quality materials that have proved their worth in hundreds of Newspaper plants throughout this country and Canada.

•

ASBESTOS SCORCHER CLOTH

FOR ALL TYPES OF MACHINES

In all standard widths, plain or wire woven, $\frac{1}{16}$ or $\frac{1}{8}$ (extra heavy).

Also Asbestos Paper and Asbestos Thread.

•

PACKING FELT GUMMED—PREPARED

ECONOMY GUMMED

(Sold in 100 sheet packages only)

.021 to .035 thickness - - - - - 2c per sheet
.040 to .045 thickness - - - - - 2¼c per sheet
.052 thickness - - - - - - - 2½c per sheet

in strips 9 inches long 25c extra per package, any width.

SUPERIOR GUMMED

Extra Fine Quality, 18 x 28, cut in strips, 15c per sheet. No charge for stripping.

FUZON

Prepared felt for extra hot scorching, in sheets 16x18. 6¼c per sheet all gauges. No charge for stripping.

All cut strips are put up in convenient pigeon-hole containers.

•

REPAIR PARTS FOR ALL MAKES OF SCORCHERS

Heat Controls, Heating Units
Asbestos-Covered Monel Wire
Asbestos Wire-Woven Cloth

•

TIME SWITCH FOR ANY TYPE OF SCORCHER

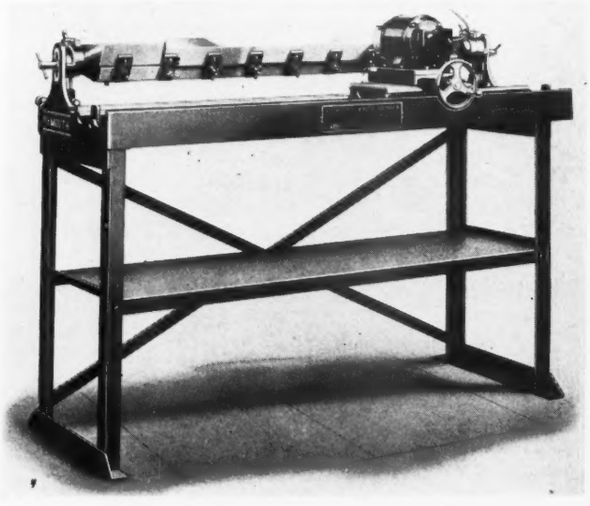
Easily installed in a few minutes by fastening to floor near scorcher and plugging into nearest electric socket.

NRA MEMBER U.S. WE DO OUR PART

American Publishers Supply
P.O. Box 131
West Lynn, Massachusetts

well as planer, jointer and timers squaring knives with blades up to 54 in. in length.

The equipment which comes with the Plymouth Knife Grinder includes a special clamp and adapter for grinding Linotype and Intertype base and side knives; a high-grade Starrett indicator for adjusting the knife to the grinding wheel and a diamond pointed grinding wheel dresser.



Plymouth Grinder for Sharpening Various Kinds of Knives Used in the Printing Industry

The carriage operates with practically no effort on a bog-shaped bed 68 in. long and 9 in. wide. A heavy triangular-shaped knife bar contains water to absorb the heat from the knife as it is being ground. A special alundum, 4-in., cup-shaped grinding wheel is mounted on the motor shaft. A 1/3 h.p. Westinghouse ball-bearing motor is standard equipment.

It is claimed by the manufacturers that the new Plymouth will grind with speed and accuracy and is simple to operate.

Vibrometer Measures Vibration Amplitude

The L. S. Starrett Company, Athol, Mass., has developed a compact instrument known as the Starrett Vibrometer for measuring the amplitude of vibration in machinery and power equipment. The instrument is particularly useful for checking the balance of units revolving at high speeds, such as turbine rotors, by simple, comparative readings.

The Vibrometer is designed for ease and convenience of use. All parts are chromium and nickel-plated. A sturdy carrying case is provided. Engineers and equipment makers as well as operators will find many practical uses for this instrument.

Descriptive circular will be furnished by The L. S. Starrett Company upon request.

A New Source of Industrial Steam

A new source of supply for steam, applicable to a wide variety of industrial processes, has been brought to light by the installation of a General Electric oil furnace in a printing plant.

The Maqua Company of Schenectady had been paying

$1,326 per 6000-hour year for steam at 14½ pounds pressure to heat wax-form melting trays, water process baths, and driers in the electrotype room. A temperature of about 245 deg. F. is necessary to melt the wax, and any temperature above that results in an excess loss of heat in the room.

The General Electric oil furnace is designed primarily for home heating and for supplying sufficient hot water for year-around household needs. One sold to and installed in the plant of the Maqua Company by Kalteux Brothers Co., Inc., of Schenectady, is controlled by a G-E pressure switch, CR-2927, which operates the furnace automatically to generate steam at between 12 and 14½ pounds per square inch pressure whenever the electrotype room is in operation. This

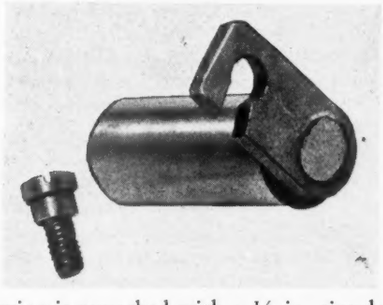
Wax-Plate Heater Supplied with Steam at 14 lbs. per. sq. in., by G.-E. Oil Furnace in Plant of The Maqua Co., Schenectady, N. Y.

gives a steam temperature of from 244 deg. to 249 deg. F., satisfactory to melt the wax without excess heat wastage.

The installation will pay for itself in about a year, for with normal operation at 6,000 hours per year the fuel will cost $396 at six cents per gallon and electric power $40 at three cents per kilowatt, or a total operating cost of $436, giving a saving of $890 per year when compared with the previous operating cost.

New Wing Pin Fastening Means

A new fastening means for the pot pump lever cam roller wing pin on line-casting machines has been devised which will prevent the pin wing turning from under the screw head while the cam roller is revolving. The pot pump lever spring exerts considerable pressure on this bearing and there is a sudden initial pressure on the wing pin when the dip in the pot pump cam raises the plunger to normal position after the cast.



In the illustration is shown the shoulder screw which is used in place of the regular 8-32 rnd. hd. screw.

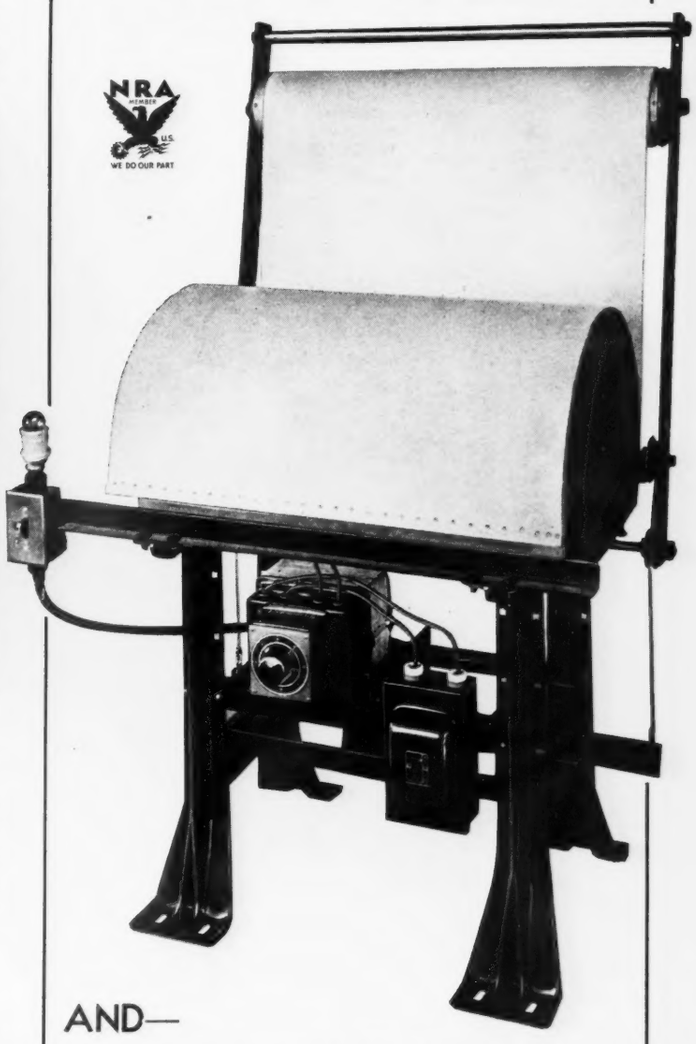
The bottom of the slot in the pin wing is reworked with a ¼-in. circular opening in order to accommodate the shoulder on the screw shank.

The screw shoulder which is approximately ¼ in. diam., corresponds in length to the thickness of wing which is ⅛ in.

NEWARK EVENING NEWS

ANOTHER MAJOR NEWSPAPER JOINS THE HOST OF USERS OF THE

FORM-O-SCORCH



AND—

How significant it is to find in this ever-increasing host, many other major newspapers such as *Boston Herald Traveler*, *Christian Science Monitor*, *Hartford Courant* and numerous others —all of whom after careful survey decided—that for efficient economical dry mat production the Form-O-Scorch was the ideal machine.

For downright efficiency in the production of perfect mats, speed, moderate initial cost and low operating cost, the Form-O-Scorch has no equal.

There is no obligation for you to learn all the details about this remarkable machine.

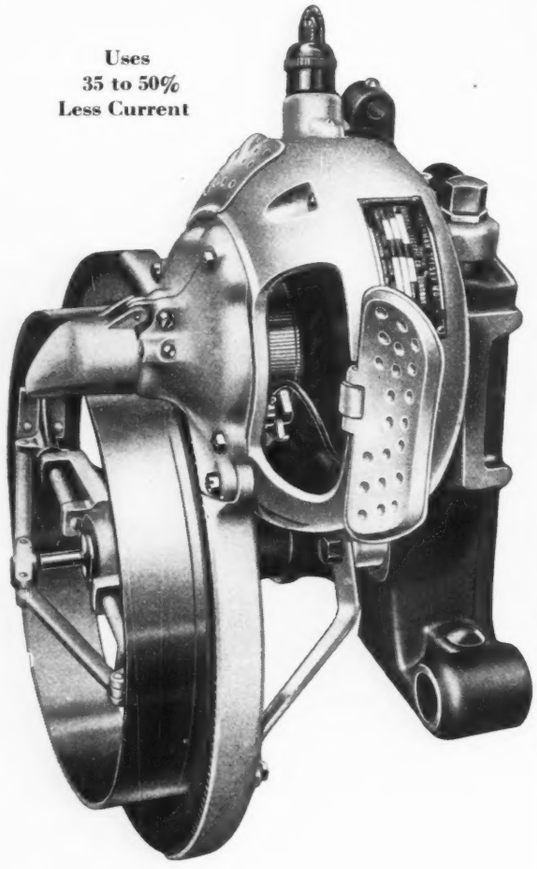
AMERICAN PUBLISHERS SUPPLY
P. O. BOX 131
WEST LYNN, MASSACHUSETTS

Specify

CUSHMAN OFFSET MOTORS

for Composing Machines

Uses 35 to 50% Less Current



WHETHER you are buying new Composing Machines or are in need of new motors on your present equipment, *Specify* Cushman Offset Motors! They are the most economical and dependable Typesetting Machine Motors available today. Let us send you a motor on trial. See how long it takes to install it on a machine. Watch it operate. Compare it in every way with any motor on any composing machine in your plant. Check up on its current consumption. In other words, get the facts! Once you have the facts you will always specify Cushman Offset Motors. May we send you one on trial? No obligation on your part.

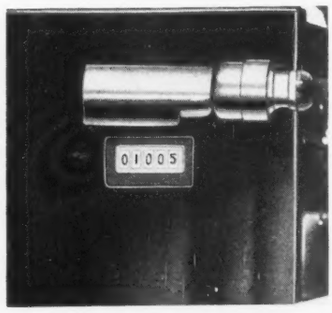
CUSHMAN ELECTRIC CO.

69 South Main Street **Concord, N. H.**

Troutman Totalizing Counter

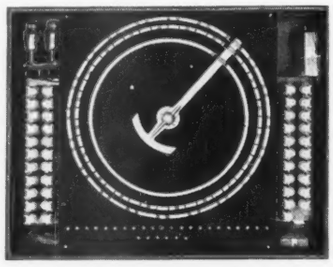
A Totalizing Counter for any production counting duty but especially for installation on newspaper press equipment is being marketed by F. B. Troutman Co., Elmhurst, Ill.

The Troutman totalizing counter when connected to a group of machines will automatically totalize and register one or more than one magnetic counter, the entire production of all machines in operation and the master counters may be reset at any time, for the beginning of a new operation.



Totalizing Control, four-press capacity, 14 in. x 14 in. x 8 in.

The equipment comprehends attachment of a contactor to each press folder. A totalizing control is connected by wiring to each contactor. The totalizing control (shown in the illustration) receives the electric impulses from the presses and relays them to the various master counters which may be installed in any department in the plant.



Master Counter, approx. size, 4 in. x 4 in. x 6 in.

An audible signal having a predetermined setting may be used with the totalizing equipment. This may be set for any given production, at the expiration of which an audible signal will be given, or the totalizing equipment may also be used to stop the machines.

New York *Sun* Orders Hoe Press Equipment

THE New York *Sun*, during the latter part of September, placed an order with R. Hoe & Co., for press equipment consisting of twenty-four super-production units, six folders, substructure, new Hoe three-arm reels, tension devices and full-speed pasters. Including the cost of electrical drives and installation, the order will mean the expenditure between the present time and next summer of more than $500,000.

In announcing the order, it was stated that the executive personnel of the *Sun* is making this contribution not merely to the improvement of its own plant but also to the success of the re-employment and buy-now campaigns of the National Recovery Administration.

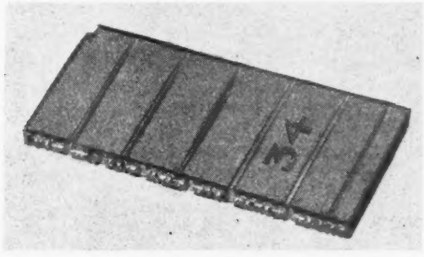
In a telegram to Harold M. Tillinghast, vice president of R. Hoe & Co., William T. Dewart, president of the *Sun* expressed himself as follows:

> Your telegram has reached me on the Ile de France just about to sail. Thank you for the sentiments expressed in it. I am triply glad to have placed the order for the presses now, first, because of the stimulus it should give to employment; second, because it helps a friend of the *Sun* of one hundred years standing, and third, but not at all least, because it will give the *Sun* the equipment it needs to satisfy the wishes of its readers and advertisers.

The press order is for twenty-four of Hoe's latest super-production units with six folders, each six units being capable of printing at the rate of 55,000 copies of a forty-eight-page paper an hour, or half that number of ninety-six-page papers in the same time. The presses will be placed in the pressroom of the *Sun* building at 280 Broadway in two twelve-unit lines, each with three folders, and will displace eight of the oldest of the *Sun's* fifteen present presses.

How to Etch Figures in Mold Caps

A METHOD of etching figures in linotype or intertype mold caps, corresponding to machine numbers, to be cast on the rib side of the slugs may be employed in the composing room so that it will be an easy matter to determine on which machine any given slug was cast. Sometimes it is desirable to know which operator set original composition, or which one made a correction after a slug has been made up in page or form. It may be necessary also to find out which machine is casting a defective slug, a poor face, or the base or trimming knives may be out of true. It is often the case that it will be desirable to make corrections on the same machine on which the original composition was done.



Photograph of slug cast in plant of Cleveland News. *The figures cast in the slug after having been etched in the mold cap.*

J. M. Dent, chief machinist of the Cleveland *News* composing room, has developed and employs the following method to etch machine numbers in mold caps.

First, the mold cap is cleaned of all oxide coating and all traces of grease removed.

At a point between any two ribs where it is desired to locate the machine number, the figures are painted in reverse with a small camel's hair brush and white water color gamboge, commonly used by engravers. The gamboge figures are then dried over a small Bunsen burner.

The bright surfaces which might be blackened from acid fumes used in etching the figures are then protected by painting on a thin coating of ordinary asphaltum. After this, the cap is passed slowly back and forth over, but not in contact with, the Bunsen burner flame so as to warm the cap evenly to harden the asphaltum. This should require not more than five minutes.

After the asphaltum has hardened, wrap a piece of cloth about the ball of a finger and gently stroke the asphaltum over the place where the figures have been painted with the gamboge. The asphaltum immediately over the gamboge (together with the gamboge) will come off easily, leaving the desired figure areas exposed and ready for etching.

The fluid employed to etch the figures is composed of:

1 part nitric acid.
5 parts chloride of iron.

Make a swab by wrapping a small quantity of cotton at the end of an applicator stick. Dip it into the acid and apply to the exposed steel.

It will not be necessary to let the acid work more than 10 seconds which will give a depth 0.0005 in. to 0.0007 in., or until the steel turns black under action of the acid. To arrest the etching process hold the mold cap under running water. The asphaltum may be removed afterward from the cap with gasoline or benzol.

In explaining the action of the etching solution Mr. Dent states that the nitric acid helps to cut through the hard outer "skin" of the mold cap and the chloride of iron cuts the steel in such a manner as to leave a smooth surface in the etched portions.

To determine the approximate depth of the figures an engraver's depthometer may be used.

Some molds having figures etched in the caps have been in use for a period of five months and from all appearances will not require attention for an indefinite period.

He Buys the Paper THAT'S OUT

AND maybe there is hell to pay in the office of the paper he asked for and didn't get. One of the boys higher up wants to know why his paper is coming in second at all the good corners.

Sooner or later he learns that the prompt paper is using Certified Mats—shortening and smoothing out the stereotyping routine in the press-time rush.

Certified Mats DO save time. Their splendid uniformity minimizes trouble. They mould with less pressure, hence less spoilage. They scorch in two-thirds to three-fourths the usual time, give perfect casts at lower temperatures, and the first cast does not have to be discarded.

Your stereotyper has a good opinion of Certified Mats. Encourage him to try them and let the results speak for themselves.

CERTIFIED DRY MAT CORPORATION
342 MADISON AVENUE NEW YORK, N. Y.

Certified DRY MATS

Something for Pressmen to Think About*

TRUE harmony between two surfaces rolling together is essential for the best quality printing, either in single or multicolor work. Where you have two metal surfaces rolling together it is comparatively easy to get true rolling contact, but where one is a hard surface, such as a type form or lithographic plate, and the other a yielding surface, such as the paper packing or rubber blanket, it then becomes more difficult. If the bearers of two cylinders to be rolled together are exactly the same diameter as the pitch line of the gears, they will work in harmony. Therefore, if a condition is set up between the hard surface and the yielding surface by which they will roll together in harmony with the bearers, the ideal condition for printing will exist. It appears that the hard surface should be exactly the same diameter as the bearers of that cylinder and the yielding surface enough larger than the bearer diameter of its cylinder, to allow for indentation in the yielding surface.

This has been the general practice in packing cylinders of printing presses, but it has been evident, from an examination of printed sheets, that where cylinders were packed in accordance with this principle, for some reason there was not true rolling contact. This was evidenced by slightly elongated halftone dots and wear of the plate or form, commonly known as "slur." Extensive research has been carried on to determine how this condition could be overcome, and it was found that what appeared to be the theoretically correct condition was not, in fact, correct.

It was found that where hard surfaces traveled against yielding surfaces, there was a tendency of the yielding surface to travel faster than the hard surface, and that in order to get true rolling contact and thus avoid elongation of the dots, slurs, gear streaks, etc., the hard surface had to be somewhat larger than bearer diameter and the yielding surface smaller than bearer diameter. The startling thing about it is that this difference is so great.

An empirical formula has been developed for packing of plate and rubber blanket cylinders of offset presses which will give true rolling contact. It is found that where the bearer diameter of the cylinder is 20 inches, the plate cylinder should be packed .010 inch higher than bearer height, and the blanket cylinder should be .008 inch under bearer height, thus allowing .002 inch for squeeze or indentation of the rubber blanket.

Continued on next page

*From "Printing Progress" Report, by B. D. Stevens, Floyd E. Wilder and George H. Carter presented at the Fourth Conference of the Technical Experts in the Printing Industry, Printing Industries Division, A. S. M. E., held in Chicago, Ill., June 27-28.

BURGESS "CHROME" MATS

They are uniform in moisture content, uniform in caliper, smooth face and back, firm texture assuring fine printing plates, exceptional facing giving easy release when casting, priced as low as quality and good business practice will permit and backed with a guarantee of satisfaction.

PRICE SCHEDULE

CAST-TEX Caliper .032	A more pliable mat designed to give maximum number of casts especially suited for automatic casting box	Humidified 15c each
NU-TEX D Caliper .032	A mat designed for newspaper plants using Automatic or Junior Auto Plate equipment	Humidified 12c each
NU-TEX C Caliper .030	A mat designed for newspaper plants using pony casting boxes	Humidified 12c each
NU-TEX B Caliper .028	A pliable mat for newspapers using standard casting boxes.	Humidified 12c each
NU-TEX S Caliper .026	A light mat for standard equipment or those desiring heavy mat for tubular equipment	Humidified 12c each
NU-TEX A Caliper .024	For tubular casting equipment	Humidified 12c each
NU-TEX Caliper .022	A thin mat for tubular casting equipment	Humidified 12c each
WET-TEX	A Nu-tex mat especially treated for wet mat operation	Dry 12c each

TERMS: NET f. o. b. Freeport, Ill. No Cash Discount. Average Wt. 325 lbs. per case of 500 mats.

BURGESS CELLULOSE COMPANY, Freeport, Illinois

At first thought it seems impossible that such a great difference could give true rolling contact, but careful tests, under the conditions described above, prove that true rolling contact is acquired. Such tests show that there is no elongation of the dots, and that the impression on the blanket from the plate is exactly the same length as the design on the plate.

Considerable research has been carried on to determine why this apparent paradox existed, and it was found that the material in the yielding surface, which was displaced by the squeeze or indent, actually flowed past the line of impression, and that the flow was greatest at the surface. Therefore the conclusion that with the hard surface packed higher than bearers, and the yielding surface lower than bearers, true rolling contact or equal surface speed could be attained.

Adsit Transfers to Commercial-Appeal

Harry B. Adsit, until recently production manager of the Pittsburgh *Post-Gazette,* is now assistant to James Hammond, publisher of the Memphis *Commercial-Appeal.* Howard Ladd has succeeded Mr. Adsit on the *Post-Gazette.*

Sheridan Co. to Handle Mikah Glues

A new service to binders has been made available by the T. W. & C. B. Sheridan Co., manufacturers of bookbinding machinery, which company will act as selling agent for all Mikah bookbinding glues and pastes produced by the National Adhesives Corporation.

This arrangement, according to John L. Humbert, manager of the adhesives division of the Sheridan Co., makes available, through a single source, technical advice for every machine or hand operation in the bindery, as well as definite recommendations as to suitable glues and pastes.

True Small Caps for Intertype Bookface

Intertype is now making special true small caps for use with most Intertype faces. Examples of these small caps for the 12-point Bookface are shown below.

THIS paragraph is set in 12 Pt.
Intertype Bookface with Italic
and *special TRUE* SMALL CAPS

Italic small caps are cut on the same matrix with the Roman small caps instead of the usual figures as provided in regular fonts.

Intertype Bookface with Italic is now completed in sizes from 6 to 14 point.

Domestic Mat Makers Organize

In order to cooperate with the President's program of industrial recovery, the American dry mat manufacturers have formed the American Dry Mat Manufacturers' Association. The following companies composed the membership: Burgess Cellulose Co., Certified Dry Mat Corporation, Morley Button Mfg. Co., and Wood Flong Corporation.

The member companies are operating under a modified President's Re-employment Agreement pending final approval of the Code.

The Code includes specifications for Fair and Unfair Competitive Practices.

An administrative body, called the Board of Governors has been set up which will supervise and direct all matters pertaining to the dry mat industry.

Let's be
LOGICAL
ABOUT HEATING
STEREOTYPE POTS

1 How much is 40 percent of your Gas Bill?

[We pause while you reach for your pencil]

2 Want to save it?

3 You can if you like

4 We'll *guarantee* it

5 HERE'S what you do...

just fill in the coupon and mail it to us. The only obligation is *ours* . . . to provide you with complete information on how to chop that 40% off the gas bill.

Fill it in NOW . . . while you've still got that pencil handy.

KEMP of BALTIMORE

C. M. KEMP MFG. CO.,
405 East Oliver St., Baltimore, Md.
Gentlemen:
What do you mean, cut 40 per cent off my gas bill? I have to be *shown* (without obligation).

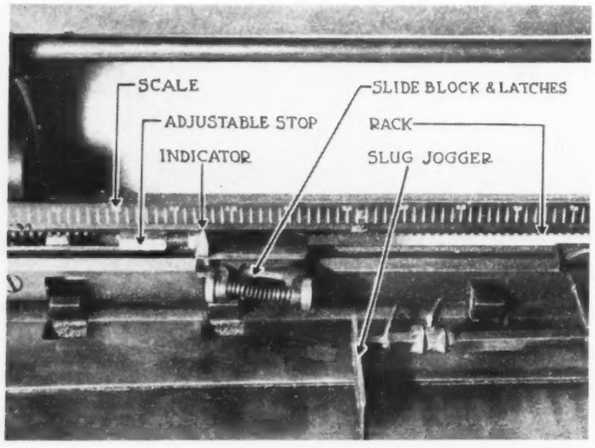
Name_____
Title_____
Paper_____

In case you're in a hurry . . .
Our telephone is VErnon 1166 (Baltimore).

Adjustable Sight Gauge for Monotype Material Maker

George G. Cooper, chief machinist, and Harold D. Toebe, monotype operator of the Rochester (N. Y.) *Times-Union*, have devised an adjustable sight gauge for the monotype material maker, which enables the operator to set strip material measures from the front of the machine.

The device consists of a scale graduated in half picas from 4 to 142 ems. The first section is arranged for both positions to allow for the use of the return stop for short em measures. The rack is a ¼ in. square steel bar having teeth cut in the



front side spaced 0.166 in. to conform with standard type measure. An indicator point attached to a latch slide block enables the operator to change the slug length by moving the slide block along the scale to the desired measure. The adjustable stop is so arranged that point adjustment may be made to allow for wear as well as making the original setting.

A feature of the device is an end slug jogger, shown in the illustration, which is adjustable for the length of material to be cast. It is constructed from a square tube with sliding extension which is locked after setting by means of a thumb screw. The jogger operates from the end of the rack and stacks the slugs automatically. It is claimed this device will eliminate pied takes on short measures.

The complete unit is manipulated in a manner similar to the linotype assembler slide from the front of the machine.

Left: Geo. G. Cooper, Chief Machinist. Right: Harold D. Toebe, Monotype Operator, Rochester (N. Y.) Times-Union.

THE LIBRARY OF CONGRESS
PERIODICAL DIVISION
WASHINGTON, D. C.

needs one copy each of PRINTING EQUIPMENT ENGINEER, Vol. 42, Nos. 4 and 6, for July and September, 1931, to complete the library file.

Has any mechanical executive these copies which he might care to forward to the Library? If so, please address: Librarian of Congress, File No. PE, Washington, D. C.

LUDLOW Operation Most Economical

I have used the Ludlow system for more than twelve years. Its low initial cost, very low upkeep, and space-saving features are outstanding—comparing it with other non-distributing composition methods. Its use has convinced me of the economies of all-slug operation.

CHAS. M. WOLF
Superintendent, Pittsburgh Press

LUDLOW TYPOGRAPH COMPANY
2032 CLYBOURN AVENUE
CHICAGO, ILLINOIS

SET IN THE LUDLOW TEMPO FAMILY

Narrow Margins

By WILLIAM FEATHER

Human nature is so constituted that the majority of men can proceed only so far against obstacles. The limit of average endurance is a known quantity in every human activity. Success is achieved by those who beat this limit by extremely small margins.

What most of us do not perceive is that an additional ounce of energy at the final breaking point will distinguish us from thousands or millions of ordinary human beings.

This is the reason why sports are so important. In athletics young men learn that victory is usually achieved by an amazingly slight advantage—by a yard in a mile race. Life is competitive. Those who go in for sports realize this.

The desire to improve is the cause of all growth. Plant life represents security. Animal life represents the spirit of adventure, the willingness to take a chance. This spirit ruled the ancestors of man; that is the reason why we are here today.

The adventurous individual will go ahead when every nerve in his body is crying to quit.

Harper's Changes to Linotype Baskerville

Harper's Magazine, founded in June, 1850, reached its one thousandth number with the September issue, and celebrated the event typographically with a change of dress from Scotch to Linotype Baskerville.

The selection of the new body type (in the ten-point size and leaded one point) was made by A. W. Rushmore, in charge of book design and manufacture for Harper and Brothers. The magazine is printed by the Rumford Press of Concord, N. H.

Order Supplies Regularly

A RECOMMENDATION made by the Auditing Department at the Gannett Group Conference in Elmira, New York, should be of interest to all mechanical executives in newspaper and commercial plants. The suggestion is that supplies for plant operation be anticipated in advance as far as possible and ordered each month regularly so as to distribute costs more evenly. Instead of going along for several months without ordering needed supplies it would be better to order them on a monthly basis. No doubt there is a psychological reason for this procedure which will appeal favorably to the business office. It at least shows that the department head is "on his toes." Experience will help determine how much material is needed over a given period. We concur in the recommendation since orderly business methods appeal to business people. Not only that, it would also be shown that plant equipment is under control and therefore, consent for the proposed expenditure will be given more cheerfully.

FRANKLIN

No-Makeready Blanket For Printing Presses

NEW—A blanket especially designed for newspapers, publications and all high-speed production on flatbed, duplex and rotary presses. Possesses a glass-smooth level surface, perfectly cushioned and 100 per cent resilient.

BETTER—Eliminates makeready altogether on newspapers and reduces makeready 80 per cent on commercial job work. Because its surface has no affinity for ink, there is no offsetting.

INCREASES RUNNING TIME—Barring accidents neither this blanket need be changed or even removed more than two or three times a year. Surface has a special non-abrasive quality and will not scratch. Owing to resiliency it does not form matrix. Two to four hours a week are saved over usual time needed to change tympans and old-style packings.

COSTS LESS—In addition to valuable time savings which are of first importance, the actual savings in costs of tympans, muslins and paper packings alone pay for them in amount invested in the Franklin No-Makeready Blanket. This equipment establishes a new standard in machine and shop efficiency.

•

Russell Products Co.
810 Samson Street
Philadelphia, Pa.

NRA MEMBER U.S.
WE DO OUR PART

THE American Dry Mat Manufacturers Association, representing 100% of the United States stereotype dry mat industry, has just been organized in order to best cooperate with the President under the National Industrial Recovery Act.

Effective with August 25th, 1933, all members of the American Dry Mat Manufacturers Association have been operating by voluntary agreement in accordance with a Code of Fair Competition for the United States stereotype dry mat industry presented by the American Dry Mat Manufacturers Association.

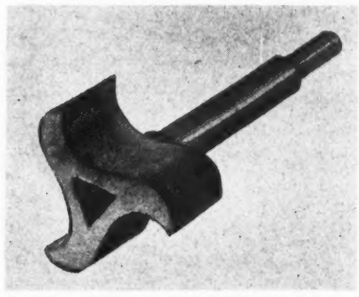
Since September 7th, all members of this Association have been operating under a modified President's Re-employment Agreement with the consent of the National Recovery Administration, pending approval by the President of their code filed as noted above.

American Dry Mat Manufacturers Association

BURGESS CELLULOSE COMPANY
CERTIFIED DRY MAT CORPORATION
MORLEY BUTTON MFG. COMPANY
WOOD FLONG CORPORATION

Three-prong Star Wheel

From time to time new types of star wheels for use in assemblers of line-composing machines have appeared upon the market. Considerable experimenting has been done in this direction in order to improve assembler action. Experimental star wheels of varying design and which have been made from both rubber and fiber have been tested from time to time in plants in different parts of the country.



The latest one which has come to our attention is made of gray fibre and has three prongs. Each prong is rounded on the driving side. The wiping action of the rounded prongs, it is said, provides smooth matrix assemblage. The "throw" of the prongs into the assembling elevator is about 1/16 in.

It is claimed that this type of star wheel has one less prong to interfere with matrices about to be delivered into the assembler and consequently each matrix has 25 per cent more chance to settle in the gullet between any two prongs, which will help to prevent matrices bounding out of the assembler to the floor, where they might be mutilated.

A special shaft having a triangular head, instead of the usual square head, is provided to fit the opening in the star wheel, which, otherwise, conforms to the conventional type.

Indianapolis News Takes Part in Parade

In Indianapolis, a parade more than six miles long was staged recently to promote compliance with the N. R. A. codes of practice on the part of both manufacturers and consumers.

The Indianapolis *News* entered in this parade a float on which were mounted a new Ludlow and a new Linotype.

representative of purchases of new equipment since the initiation of the N. R. A. campaign. These machines were in position with operators at work.

The Ludlow was one of the two new machines recently installed by the Indianapolis *News* to bring up to date its equipment for hand-set, slug-cast composition, a system it has been using for many years. This newspaper also made, at the same time, a considerable addition to its selection of Ludlow matrices.

Do They Make You The "Goat?"

PINNING the responsibility for trouble on the other fellow's department is a national pastime in the printing industry. The man who knows the least generally is the "goat." When the front office starts asking questions, every mechanical executive who wants to escape "clean" must have the answers.

Take the case of Type Metal. It's easy enough to get the lowdown on type metal and everyday type metal troubles. Just send for a copy of our complimentary booklet, "Everyday Problems of the Type Metal User and Their Solutions." This booklet answers metal trouble questions for the composing room, monotype department, stereotype department, and press room. If you know the answers to the questions in this book you are fairly sure to avoid troublesome metal questions. Thousands of mechanical executives use the Imperial Type Metal Company as a clearing house for metal problems. By standardizing on Imperial Metal, sending frequent samples for analysis and seeking the help of Imperial to solve your metal problems, you can avoid being made the "goat."

Imperial METAL

THE IMPERIAL TYPE METAL CO.
Philadelphia · New York · Chicago · Los Angeles

Impressions in Wood Dry Mats

Quality has always been a first consideration in the making of Wood Dry Mats. It is reflected in the casts they produce.

The small type of your stock and sport pages or the bold display of your advertising columns are equally served by Wood quality to the satisfaction of your readers.

Let us send a supply of Wood Mats for a trial—FREE.

WOOD DRY MATS
ALWAYS UNIFORM

NRA

WOOD
FLONG CORPORATION
HOOSICK FALLS, N.Y.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Are You Tempted to buy Cheap Spacebands?

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

READ THIS: Here is the truth about spacebands. We want you to consider these facts if you are tempted to use a cheaper spaceband to save a few cents.

STAR SPACEBANDS

Are consistently accurate. "Mike" them up. You will find no variation in measurement.

Sleeves, twice polished to insure smooth-as-possible surface. Less adhesion of metal.

Backs of Sleeves ground to eliminate possibility of hair lines caused by rough surface.

Eccentric Pin. The only spaceband with patented eccentric pin. Makes sleeve-changing the work of a moment. Broken sleeves are changed in a few seconds. No bothering with stop pins. No filing to bring end of pin flush with band.

Sleeves and Wedges in any of the five sizes are 90% interchangeable. That is how accurate we make Star Spacebands.

Star Spacebands are more economical because they have extremely low maintenance cost, save labor, and save in replacement cost.

Send today for complete information and prices. It pays to use Stars.

LINOTYPE PARTS CORPORATION

NEW YORK
203 Lafayette Street

KANSAS CITY
314 West 10th Street

Agencies

CHICAGO
318 W. Randolph St.

LOS ANGELES
1520 Georgia Avenue

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Standards in Letterpress Printing

(Continued from page 9)

It is next to impossible to describe step by step the procedure necessary to accomplish this further elimination of time waste. However, we found a method of placing positive register marks on plates after they are completed in every detail in the plate-making department and prior to being sent to the pressroom.

After plates are register-marked, the real problem now confronts us as to how and where to put these plates in position on the press. The old procedure requiring so much time depended on the pressman, who had various means of doing this work. Guided by the customary layout sheet furnished him by the layout department and by the rule-of-thumb method, he placed his plates in rough position. After taking an impression on the press, the sheet was taken to the line-up table, lines drawn on the sheet showing in which direction the plates were to be moved in order to give a line-up on the key form. He then proceeds to place the other color plates and form a rough position, after which by various means the plates were moved to final register.

PLATE PRE-REGISTERING DEVICE

With the aid of the new plate-registering device the pressman takes the layout furnished by the layout or planning department, giving micrometric position of plates on cylinder or bed to correspond exactly to the register marks mechanically placed on the plates. By following this new system it is possible that the first sheet pulled on the press is in absolute line-up position—in fact, more closely than was obtained by the check-up of the old method of line-up sheet, because this old line-up sheet was paper which goes and comes with atmospheric conditions. The new method is dependent only on mathematics and mechanical positioning.

It is difficult to realize that all plates can be put in register on the press mechanically before a single sheet is printed, eliminating the necessity of moving plates around after numerous trial sheets have been printed for register, consuming many hours of down press time, which is exactly what is eliminated by this new system of registering. In fact, part of this system does not stop with registering plates. The pile of paper placed in the feeder lift is positioned to micrometric measurement in relation to the front and side guides without trial and without running the press. Also the joggers on the delivery and position on delivery to receive the sheet are adjusted to micrometric position before a sheet is printed on the press. One does not realize the importance of all these mechanical methods until the time element is thoroughly analyzed in operating modern equipment.

For example, a five-color press running at a speed of 3600 sheets per hour, yields a sheet a second printed in five colors. Therefore, one minute's down time is the loss of 60 sheets, and if you are running a five-color press, you will lose five times 60 or 300 impressions per minute. This means a loss of production of 18,000 impressions per hour. It is therefore readily appreciated that mechanical means must be employed in place of the slip-shod, costly and time-consuming methods of the past.

THE PRECISION PRINTING PRESS

The culmination of our effort is always the final press work. Here precision and accuracy are vitally important. Throughout industry today there is a marked and definite effort to not only keep mechanical equipment up to a high standard of performance, but wide-spread plans for replacement of inaccurate, worn-out equipment with new equipment built to higher standards.

Much of the profit problem rests squarely upon the printer's mechanical equipment. Many are attempting to produce good work on presses that not only are worn badly, but are positively antiquated. Good presswork cannot be done on a badly worn, obsolete press, and for this same reason, normal speeds are impossible and consequent low production is the result. Higher speeds are essential, and there is no reason why we should be satisfied with press speeds of from 900 to 1200 single color impressions per hour when one to five colors printed in one operation are now possible at speeds better than 3000 sheets per hour.

The production of printing is an exact and accurate mechanical procedure, and the printer, in dealing with plates, paper and ink, deals constantly in terms of thousandths of an inch. Obtaining quality printing in volume, without laborious effort and gross wastefulness, is therefore, according to all laws of mechanics, absolutely impossible unless the tools with which it is produced are also accurate to the same degree. Printing equipment built to any but absolutely accurate standards, to any but long-life, perfect performance standards, cannot and will not provide the printer with the capabilities which the very nature of his production demands.

The doctrine of more precise and accurate printing standards will bring to those who adopt it the reward of accomplishing the finest results in the most economical and efficient way.

Catalogs, Books and Bulletins

Readers of PRINTING EQUIPMENT ENGINEER who are interested in securing any of the catalogs, books or bulletins listed below can do so by checking the literature desired. Mark carefully only that literature which you wish to receive. Fill out the coupon and send it to us. The literature will be forwarded without cost except where noted.

Linotype Metal Conservation and Increased Production—Bulletin illustrating and describing feeder for application to Linotypes and Intertypes.

The New Stahi Autoformer—Four-page illustrated folder which contends that uniform casting levels can be obtained through the use of this machine.

Illustrated Folder—Describing the successive installations of a stereotype matrix forming machine in a prominent metropolitan newspaper plant.

Bulletin—Illustrating a ball-bearing roller core for application to commercial and newspaper presses.

Reduce Composition Costs—Folder telling about a line of saws capable of doing the various cutting duties required in the composing room.

Transforming Tables—A valuable handbook by James C. McIntosh. Price $3.00. For owners and operators of Monotypes for use in making computations in conjunction with the keyboard.

Printing Equipment Engineer,
1370 Ontario St., Cleveland, Ohio.

Gentlemen: Please send the literature checked above without obligation.

Name of Company _____

Attention of _____

Position _____ Dept. _____

Street Address _____

City _____ State _____

Right The First Time

When a page leaves the Hacker Make-Up Gauge it is finished. It needs no further justifying nor aligning nor registering. It is right. It was put together right in what is obviously the proper place — on the make-up bank.

This puts an end to stonemen going over compositors' work. It puts an end to a lot of shifting and ferreting out of work-ups on the press. It gets forms right in the beginning.

Very substantial economies follow the installation of the Hacker Make-Up Gauge. Send for catalog.

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320 SOUTH HONORE STREET CHICAGO

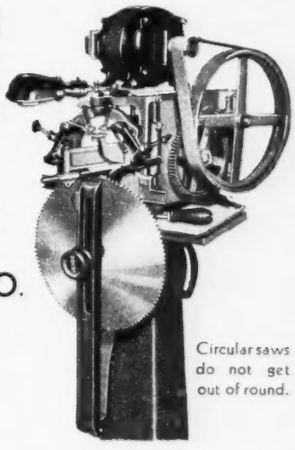
FREE Trial Offer

Your Saws will cut better, faster, truer—

and they will stay sharp longer when filed on the Foley. Every tooth filed exactly to uniform size and spacing—every tooth cuts.

FOLEY AUTOMATIC SAW FILER

One Machine files all kinds of saws—band saws, hand saws, cross-cut circular saws, 3" to 24"—also metal-cutting circular saws. Fully automatic—no slow, tedious hand work.



Circular saws do not get out of round.

30-Day Free Trial

Use it on all your saws. Write us today for complete information.

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57 Main Street N. E.
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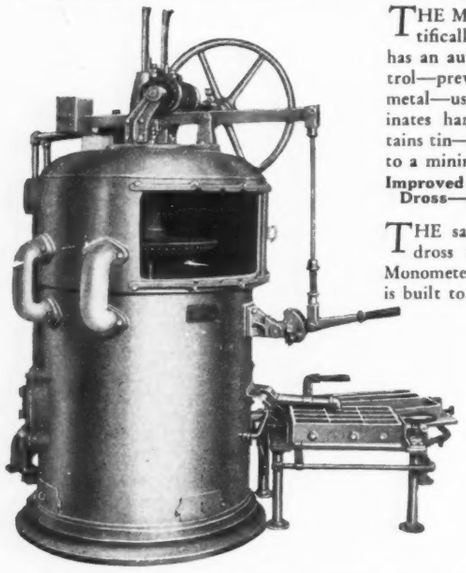
Boston American
Boston Herald
Chicago Daily News
Christian Science Publishing Co.
Curtis Publishing Co.
Detroit Times
Hearst Papers
Minneapolis Journal
Philadelphia Public Ledger
Portland Oregonian
Providence Journal
St. Louis Star.
Washington (D. C.) Star
and many other Newspapers and commercial printing plants.

Every Newspaper Plant
can profitably install
Monarch Monometer
RE-MELTING FURNACE Operated with Electricity Gas or Oil



THE Monometer is scientifically constructed. It has an automatic heat control—prevents burning of metal—uses less gas—eliminates harmful fumes—retains tin—and reduces dross to a minimum.

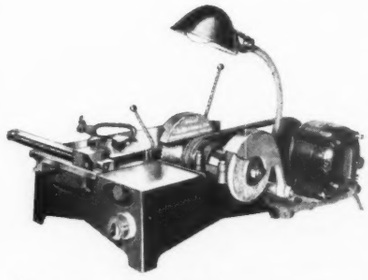
Improved Metal—Reduced Dross—Saving in Fuel

THE saving in fuel and dross will pay cost of Monometer in one year. It is built to last a lifetime.

Write for Catalog P. E. L.

The Monarch Engineering & Mfg. Co.
701 - 702 American Bldg., Baltimore, Md., U. S. A.
Works, Curtis Bay, Md.

Why Your Plant Cannot Afford To Be Without Cost Cutter Saws



Cost Cutter Saws speed up your production and increase accuracy. They cut to points or fractions of points, leads, slugs, rule, type, borders, ornaments, stereotypes, electrotypes and other printing office materials of lead, brass, copper, zinc and wood.

Above is an illustration of Model "A" all-purpose saw trimmer for small plants, ad-alleys, or as an auxiliary. It saws, trims at a single operation, miters, outside mortises, and grinds. Model "B", the larger model, is even more efficient.

A postcard will bring you information telling how easy it is to own either a Model "A" or a Model "B" and how they save money in your plant.

C. B. NELSON & COMPANY
727 SOUTH DEARBORN ST. CHICAGO, ILLINOIS

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HUBER CODE OF FAIR TRADE PRACTICES

WHEREAS: This Company has pledged itself to cooperate with the N. R. A. in spirit as well in letter, and

WHEREAS: After 150 years' service to the printing trades, J. M. Huber, Inc., will not jeopardize its reputation, and

WHEREAS: It is inevitable that the administration of the N. R. A. will cause an advance in costs,

THEREFORE, BE IT RESOLVED: This Company will continue its policy:

NO CHANGE WHATEVER WILL BE MADE IN THE QUALITY OF ANY INK USED BY A CUSTOMER WITHOUT HIS SPECIFIC AUTHORIZATION.

J. M. HUBER, INC.

NEW YORK, N. Y.

Boston	Chicago	Des Moines	St. Louis
Cleveland	Twin Cities	Omaha	Washington

NEWS • GRAVURE • COMIC • MAGAZINE INKS

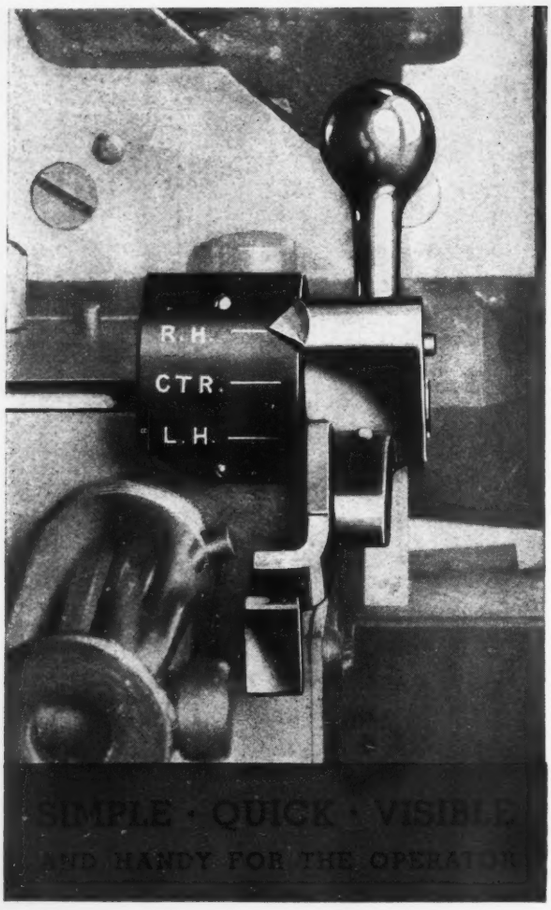
for October, 1933

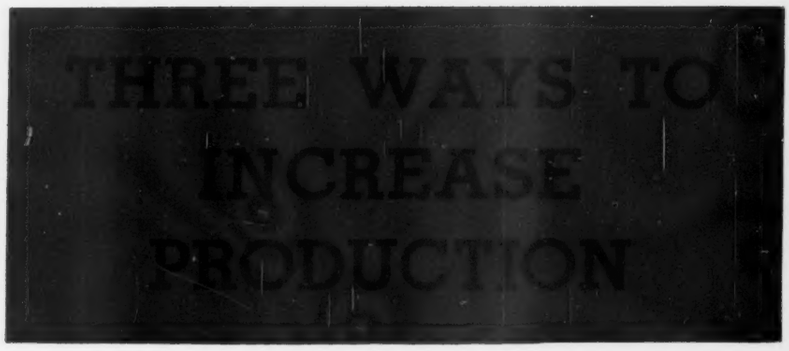
1 AUTOSPACER INTERTYPE QUADS AT LEFT

2 INTERTYPE AUTOSPACER QUADS AT RIGHT

3 AUTO INTERTYPE SPACER CENTERS CENTERS

ALL FULLY AUTOMATIC





You can readily realize what savings are possible when you understand that the Intertype Universal Autospacer AUTOMATICALLY composes the white space on hundreds of printing jobs—white space which would otherwise be set at slower speed from the keyboard. The possibilities that this new Intertype Universal Autospacer has for making extra profits for many composing rooms are much greater than may seem at first thought.

Catalogs, Stationery, Booklets, Menus, Publications, Tickets, Title Pages, etc., are just crowded with short and centered lines most of which cost more to set than straight matter. With the aid of the Intertype Universal Autospacer intricate composition can be set faster and more economically than ordinary straight matter.

The Intertype Universal Autospacer is both simple and foolproof. When set for either quadding or centering not a single manual change is necessary in order to proceed with straight-matter composition.

Get all the facts about the New Intertype Universal Autospacer—a genuine time and money-saving necessity in well-managed composing rooms.

INTERTYPE CORPORATION

Brooklyn, New York; 360 Furman Street; Chicago, 130 North Franklin Street; New Orleans, 1007 Camp Street; San Francisco, 152 Fremont Street; Los Angeles, 1220 South Maple Avenue; Boston, 80 Federal Street; Canada, Toronto Type Foundry Company Limited, Toronto. Distributors Throughout the World

Set on the Intertype in Cairo